

**PL-TR-95-2037(II)**

## **CIRRIS 1A POST FLIGHT CALIBRATION**

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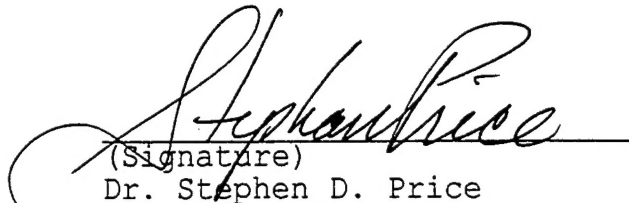
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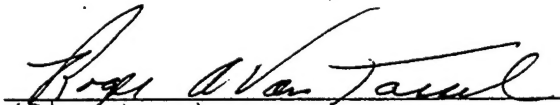
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# REPORT DOCUMENTATION PAGE

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12a. DISTRIBUTION/AVAILABILITY STATEMENT  Approved for public release; distribution unlimited				12b. DISTRIBUTION CODE	
13. ABSTRACT (Maximum 200 words)  The Cryogenic Infrared Radiance Instrumentation for Shuttle (CIRRIS 1A) instrument is a state-of-the-art cryogenically cooled instrument designed to observe the infrared spectrum of the earth's atmosphere. The Space Dynamics Laboratory at Utah State University (SDL/USU) participated as the prime contractor in this program. CIRRIS 1A was launched on the shuttle Discovery (STS-39) on 28 April 1991. All of the instruments operated as designed during the mission. Data obtained from this experiment will help refine knowledge of the background radiance and structure of atmospheric infrared emissions, and will be used to update and validate U.S. Air Force atmospheric models used in the design of operational systems. SDL/USU performed a complete ground calibration of the primary and ancillary sensors to verify instrument design and to create algorithms necessary for post flight data reduction. This report represents Volume 2 of the CIRRIS 1A Post Flight Calibration Final Report. Volume 2 contains reduced data for various parameters for all of the detectors. Volume 1 describes the calibration approach, discusses the results of the calibration, and provides graphical data for the primary detectors of each sensor. General descriptions of the radiometer and interferometer are also included.					
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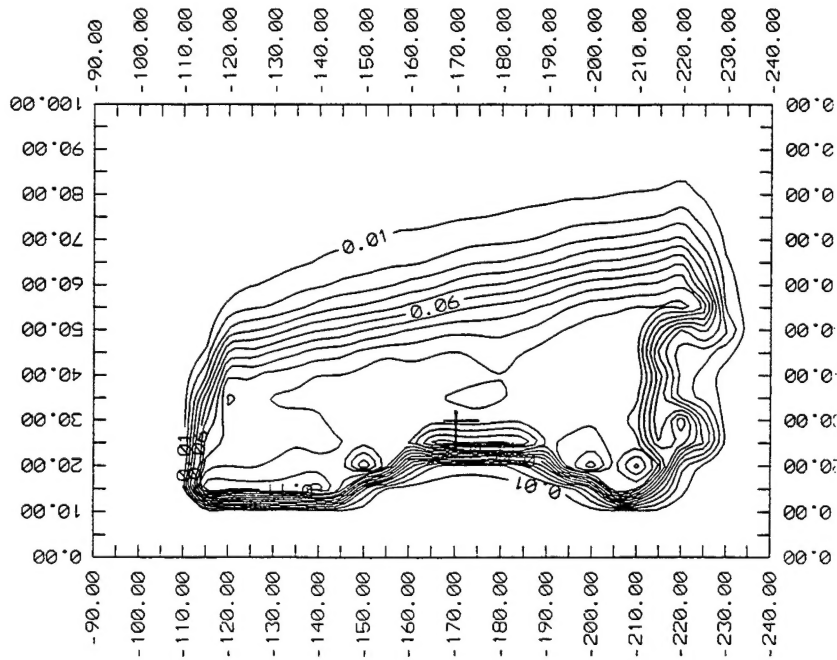
## FOREWORD

The Cryogenic Infrared Radiance Instrumentation for Shuttle (CIRRIS 1A) program, sponsored by the Strategic Defense Initiative Organization (SDIO) and managed by the Geophysics Directorate of the USAF Phillips Laboratory, is a state-of-the-art cryogenically cooled instrument designed to observe the infrared spectrum of the earth's atmosphere. The Space Dynamics Laboratory at Utah State University (SDL/USU) was awarded contract no. F19628-81-C-0123 to participate as the prime contractor in this program. As part of this program, SDL designed, constructed, calibrated, tested, and integrated primary and support instruments for the CIRRIS 1A experiment. In addition, SDL personnel provided mission support and documentation, including flight crew training. CIRRIS 1A was launched on the space shuttle Discovery on 28 April 1991. All of the instruments operated as designed during the mission.

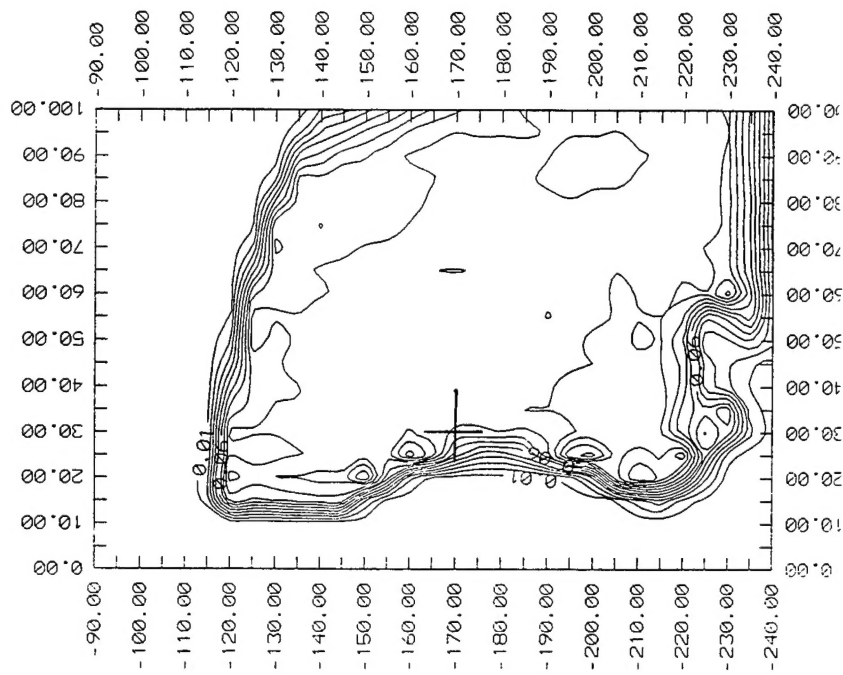
This report, submitted in compliance with CDRL 160, presents the results of the CIRRIS 1A post flight calibration. This document represents the current understanding of the CIRRIS 1A calibration accuracy and applicability to the data collected during the CIRRIS mission. Several drafts of this report were previously submitted for review; this document is the final submission. The calibration coefficients will continue to be refined as the flight data are further analyzed.

This document represents Volume 2 of the CIRRIS 1A Post Flight Calibration Final Report. This volume contains reduced data for various parameters for all of the detectors. The calibration approach and results are presented in Volume 1.

SDL/USU would like to acknowledge Boston College, Miranda Laboratories, and PhotoMetrics for alignment and pointing data, and coding of OPUS.



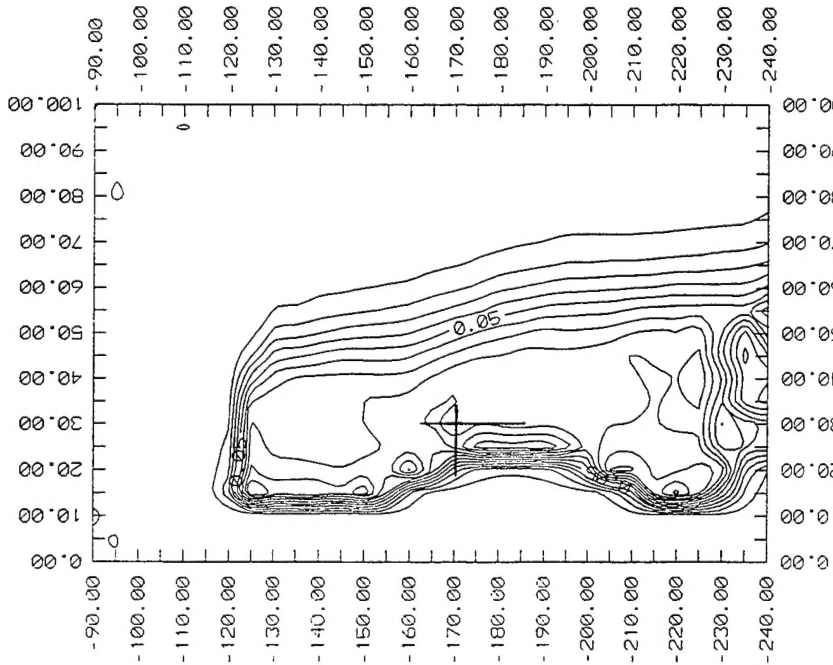
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 Starting X... 0.00  
 Starting Y... -240.00  
 Number of X... 21  
 Number of Y... 31  
 Delta X... 5.00  
 Delta Y... 5.00  
 Minimum 0.00000  
 Maximum 0.14199  
 D:\RPSMAP10\M10D11L



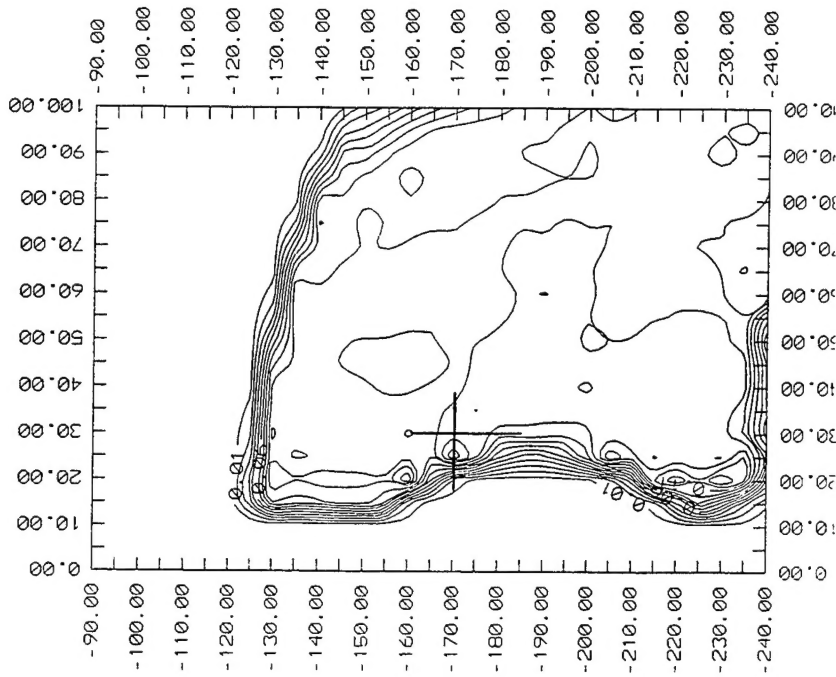
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 Starting X... 0.00  
 Starting Y... -240.00  
 Number of X... 21  
 Number of Y... 31  
 Delta X... 5.00  
 Delta Y... 5.00  
 Minimum 0.00009  
 Maximum 0.13251  
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Jones source maps for radiometer detectors 1-1 and 1-2.



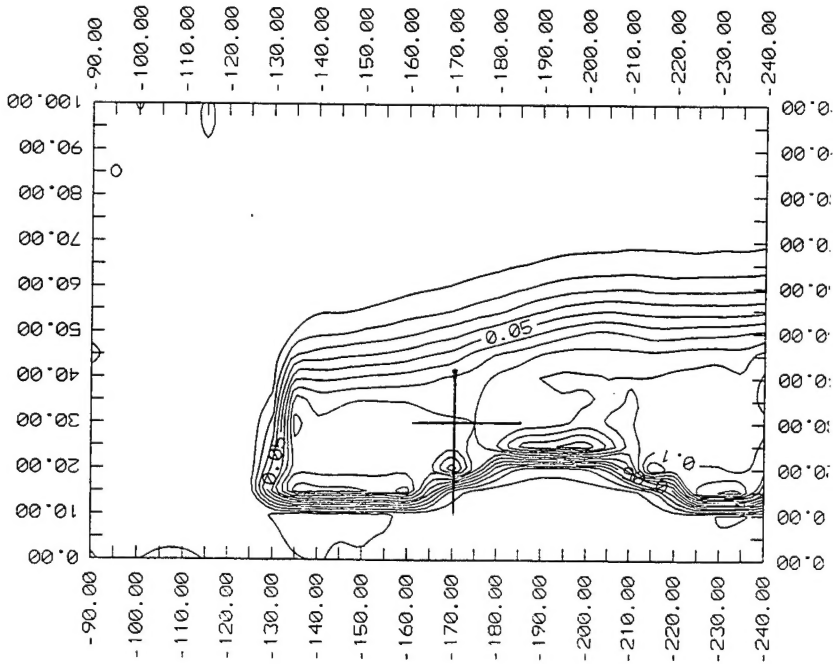


DESCRIPTION  
 Detector... 1-3L  
 Starting X... 0.00  
 Starting Y... -240.00  
 Number of X... 21  
 Number of Y... 31  
 Delta X... 5.00  
 Delta Y... 5.00  
 Minimum -0.00008  
 Maximum 0.12249  
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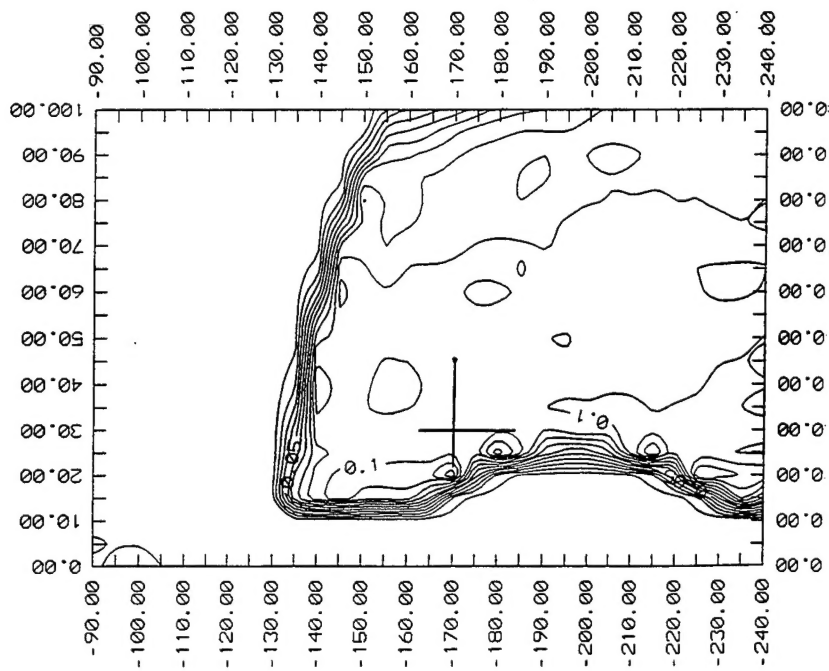
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 Starting X... 0.00  
 Starting Y... -240.00  
 Number of X... 21  
 Number of Y... 31  
 Delta X... 5.00  
 Delta Y... 5.00  
 Minimum 0.00013  
 Maximum 0.14037  
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Jones source maps for radiometer detectors 1-3 and 1-4.

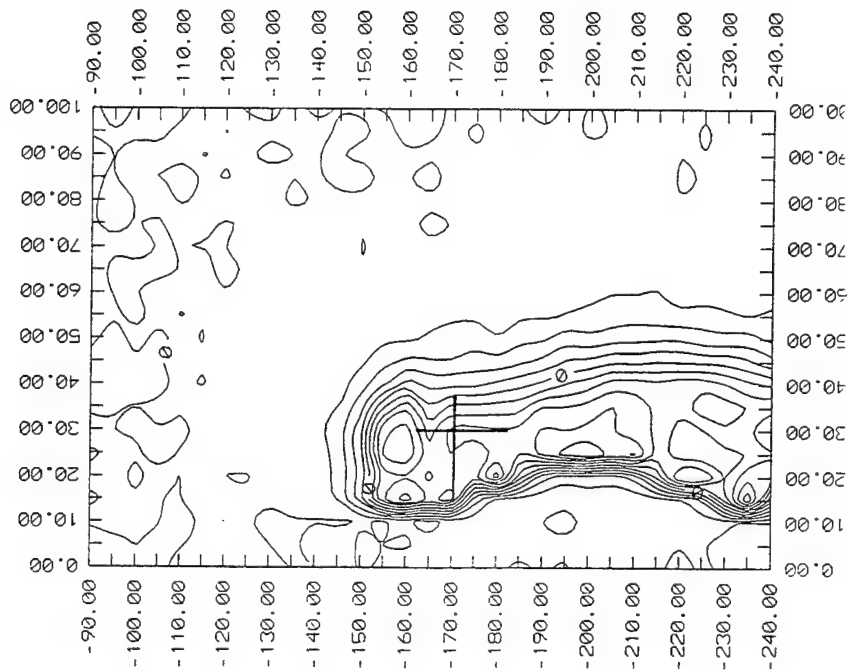


DESCRIPTION  
 Detector... 1-5L  
 Starting X... 0.00  
 Starting Y... -240.00  
 Number of X... 21  
 Number of Y... 31  
 Delta X... 5.00  
 Delta Y... 5.00  
 Minimum -0.00079  
 Maximum 0.12647  
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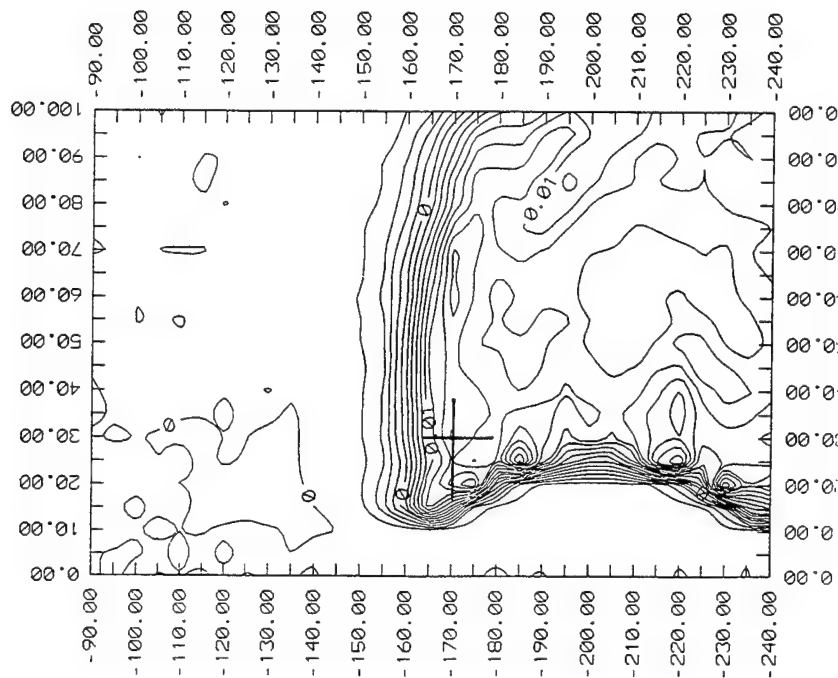
Jones source maps for radiometer detectors 1-5 and 1-6.



DESCRIPTION  
 Detector... 1-6L  
 Starting X... 0.00  
 Starting Y... -240.00  
 Number of X... 21  
 Number of Y... 31  
 Delta X... 5.00  
 Delta Y... 5.00  
 Minimum -0.00013  
 Maximum 0.12991  
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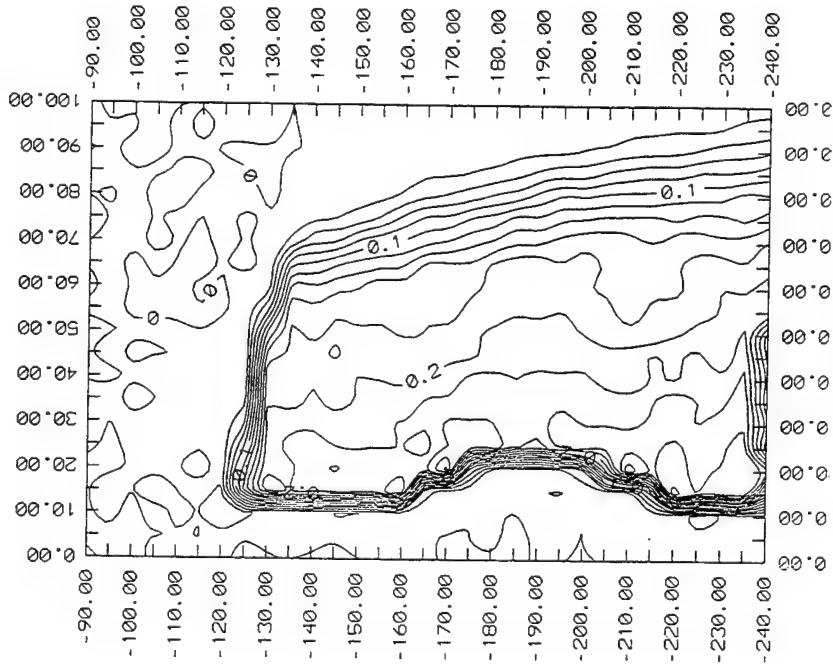


DESCRIPTION  
 Detector.... 1-7L  
 Starting X... 0.00  
 Starting Y... -240.00  
 Number of X... 21  
 Number of Y... 31  
 Delta X..... 5.00  
 Delta Y..... 5.00  
 Minimum -0.00024  
 Maximum 0.01079  
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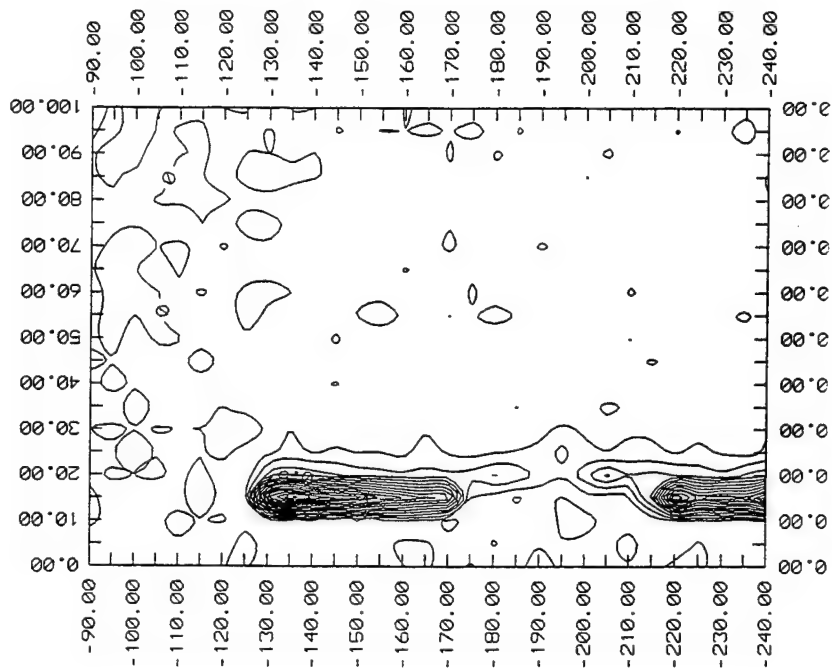


DESCRIPTION  
 Detector.... 1-8L  
 Starting X... 0.00  
 Starting Y... -240.00  
 Number of X... 21  
 Number of Y... 31  
 Delta X..... 5.00  
 Delta Y..... 5.00  
 Minimum -0.00018  
 Maximum 0.01789  
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Jones source maps for radiometer detectors 1-7 and 1-8.

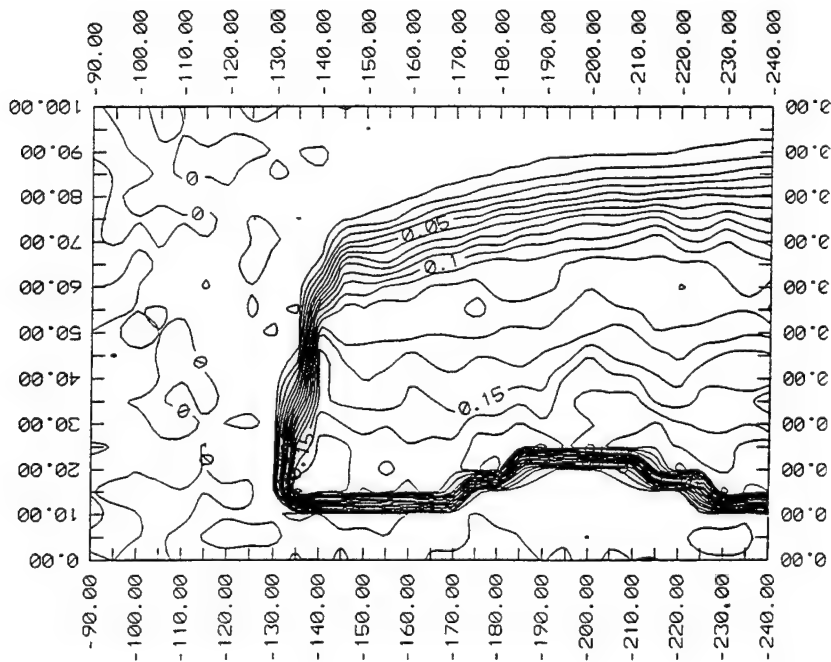


DESCRIPTION  
 Detector... 2-1H  
 Starting X... 0.00  
 Starting Y... -240.00  
 Number of X... 21  
 Number of Y... 31  
 Delta X... 5.00  
 Delta Y... 5.00  
 Minimum -0.00277  
 Maximum 0.29134  
 D:\RPSMAP10\M10D21H

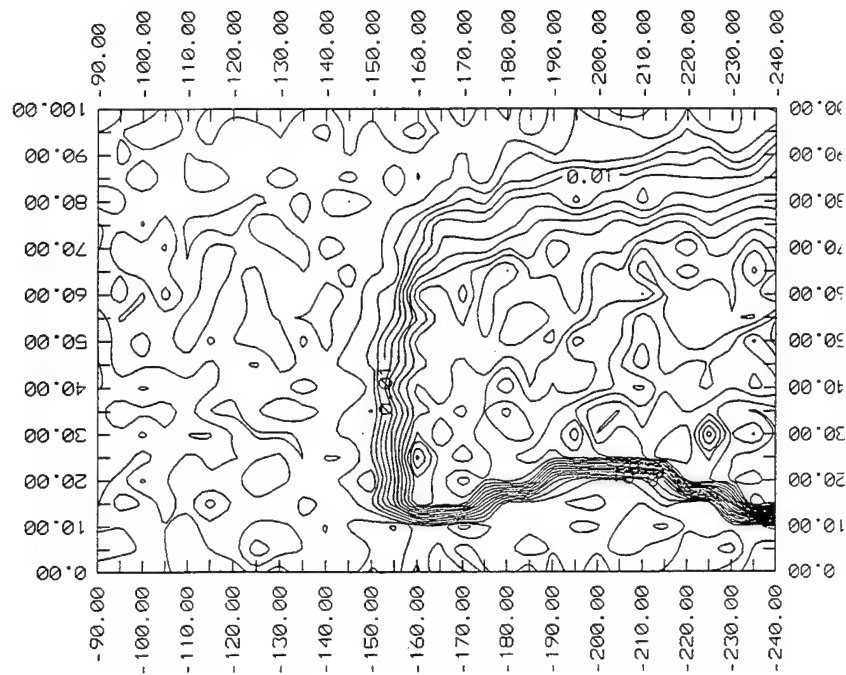


DESCRIPTION  
 Detector... 2-2H  
 Starting X... 0.00  
 Starting Y... -240.00  
 Number of X... 21  
 Number of Y... 31  
 Delta X... 5.00  
 Delta Y... 5.00  
 Minimum -0.05535  
 Maximum 1.56265  
 D:\RPSMAP10\M10D22H

Jones source maps for radiometer detectors 2-1 and 2-2.

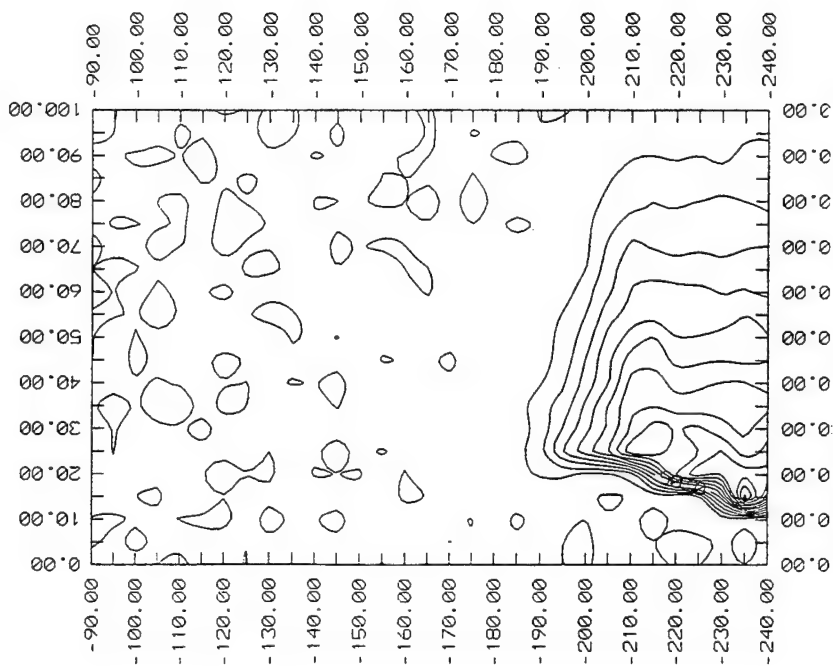


DESCRIPTION  
 Detector... 2-3H  
 Starting X... 0.00  
 Starting Y... -240.00  
 Number of X... 21  
 Number of Y... 31  
 Delta X... 5.00  
 Delta Y... 5.00  
 Minimum -0.00277  
 Maximum 0.19387  
 D:\RPSMAP10\M10D23H



DESCRIPTION  
 Detector... 2-4H  
 Starting X... 0.00  
 Starting Y... -240.00  
 Number of X... 21  
 Number of Y... 31  
 Delta X... 5.00  
 Delta Y... 5.00  
 Minimum -0.00331  
 Maximum 0.03585  
 D:\RPSMAP10\M10D24H

Jones source maps for radiometer detectors 2-3 and 2-4.



DESCRIPTION  
 Detector . . . 2-5H  
 Starting X . . 0.00  
 Starting Y . . -240.00  
 Number of X . . 21  
 Number of Y . . 31  
 Delta X . . . 5.00  
 Delta Y . . . 5.00  
 Minimum . . -0.00305  
 Maximum . . 0.13269  
 D:\RPSMAP10\N10D25+

Jones source maps for radiometer detectors 2-5.

**CIRRIS 1A Radiometer Linearity Coefficients**  
(focal plane 1, filter 0, bandpass, linear fit)

DET	BIAS	GAIN	A1	A2	S.D.	MIN. VOLT.	MAX. VOLT.
1-1	HI	LO	4.04044E+00	-4.06883E-01	1.97368E-04	5.90900E-04	1.59300E+00
1-2			2.15022E+00	-2.16524E-01	1.97925E-04	5.90900E-04	1.59300E+00
1-3			4.86650E+00	-4.90052E-01	1.97816E-04	5.90900E-04	1.59300E+00
1-4			2.07024E+00	-2.08483E-01	1.97037E-04	5.90900E-04	1.59300E+00
1-5			5.00050E+00	-5.03538E-01	1.98077E-04	5.90900E-04	1.59300E+00
1-6			2.03032E+00	-2.04303E-01	1.60217E-02	5.90900E-04	1.59300E+00
1-7			7.39075E+01	-7.44237E+00	1.97930E-04	5.90900E-04	1.59300E+00
1-8			1.75018E+01	-1.76244E+00	1.97691E-04	5.90900E-04	1.59300E+00
1-1	HI	HI	4.07042E-02	-4.09890E-03	1.97782E-04	5.90900E-04	1.59300E+00
1-2			2.50027E-02	-2.51783E-03	1.97397E-04	5.90900E-04	1.59300E+00
1-3			5.00054E-02	-5.03565E-03	1.97397E-04	5.90900E-04	1.59300E+00
1-4			2.14022E-02	-2.15520E-03	1.97737E-04	5.90900E-04	1.59300E+00
1-5			5.30055E-02	-5.33764E-03	1.97733E-04	5.90900E-04	1.59300E+00
1-6			2.13023E-02	-2.14517E-03	1.97491E-04	5.90900E-04	1.59300E+00
1-7			7.60085E-01	-7.65435E-02	1.97162E-04	5.90900E-04	1.59300E+00
1-8			1.95020E-01	-1.96384E-02	1.97798E-04	5.90900E-04	1.59300E+00
1-1	MED	LO	3.03414E+01	0.00000E+00	3.13351E-03	1.49600E-01	6.12700E-01
1-2			1.71432E+01	0.00000E+00	3.10408E-03	2.72600E-01	1.09300E+00
1-3			3.16675E+01	0.00000E+00	1.10090E-02	1.43500E-01	5.86800E-01
1-4			1.57333E+01	0.00000E+00	4.32499E-03	2.98000E-01	1.19200E+00
1-5			3.60025E+01	0.00000E+00	2.35026E-03	1.26700E-01	5.17200E-01
1-6			1.51775E+01	0.00000E+00	1.06077E-02	3.14700E-01	1.80100E+00
1-7			5.84064E+02	0.00000E+00	6.15571E-03	8.06100E-03	4.67200E-02
1-8			1.16936E+02	0.00000E+00	2.67001E-03	3.83000E-02	2.31100E-01
1-1	MED	HI	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-2			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-3			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-4			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-5			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-6			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-7			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-8			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-1	LO	LO	2.89243E+02	0.00000E+00	1.91450E-02	9.81800E-02	2.27600E+00
1-2			1.60492E+02	0.00000E+00	1.54137E-02	1.74400E-01	1.97400E+00
1-3			3.13617E+02	0.00000E+00	3.04576E-02	9.05800E-02	2.09500E+00
1-4			1.46450E+02	0.00000E+00	1.95774E-02	1.87300E-01	2.16500E+00
1-5			3.46726E+02	0.00000E+00	3.67822E-02	8.16700E-02	1.89400E+00
1-6			1.41526E+02	0.00000E+00	7.86006E-03	2.92700E-01	2.25100E+00
1-7			5.89601E+03	0.00000E+00	5.77316E-02	1.81800E-02	1.32600E+00
1-8			1.11848E+03	0.00000E+00	3.80401E-02	3.75300E-02	2.17600E+00
1-1	LO	HI	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-2			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-3			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-4			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-5			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-6			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-7			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-8			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

**CIRRIS 1A Radiometer Linearity Coefficients**  
(focal plane 1, filter 1, bandpass, linear fit)

DET	BIAS	GAIN	A1	A2	S.D.	MIN. VOLT.	MAX. VOLT.
1-1	HI	LO	2.80030E+01	-2.81996E+00	1.97384E-04	5.90900E-04	1.59300E+00
1-2			1.55017E+01	-1.56104E+00	1.97421E-04	5.90900E-04	1.59300E+00
1-3			3.97043E+01	-3.99830E+00	1.97423E-04	5.90900E-04	1.59300E+00
1-4			1.55017E+01	-1.56104E+00	1.97421E-04	5.90900E-04	1.59300E+00
1-5			4.14044E+01	-4.16949E+00	1.97512E-04	5.90900E-04	1.59300E+00
1-6			1.67018E+01	-1.68191E+00	1.97469E-04	5.90900E-04	1.59300E+00
1-7			6.27063E+02	-6.31440E+01	1.98031E-04	5.90900E-04	1.59300E+00
1-8			1.25014E+02	-1.25894E+01	1.97146E-04	5.90900E-04	1.59300E+00
1-1	HI	HI	2.80033E-01	-2.82011E-02	1.96884E-04	5.90900E-04	1.59300E+00
1-2			1.59017E-01	-1.60134E-02	1.97363E-04	5.90900E-04	1.59300E+00
1-3			3.90040E-01	-3.92769E-02	1.97798E-04	5.90900E-04	1.59300E+00
1-4			1.48016E-01	-1.49055E-02	1.97410E-04	5.90900E-04	1.59300E+00
1-5			4.20045E-01	-4.22995E-02	1.97428E-04	5.90900E-04	1.59300E+00
1-6			1.62018E-01	-1.63155E-02	1.97374E-04	5.90900E-04	1.59300E+00
1-7			6.40069E+00	-6.44564E-01	1.97397E-04	5.90900E-04	1.59300E+00
1-8			1.35015E+00	-1.35968E-01	1.96995E-04	5.90900E-04	1.59300E+00
1-1	MED	LO	2.35997E+02	0.00000E+00	2.79648E-03	9.06500E-02	2.07600E-01
1-2			1.30052E+02	0.00000E+00	3.13445E-03	1.64400E-01	3.76600E-01
1-3			2.93441E+02	0.00000E+00	2.63949E-03	7.30400E-02	1.67100E-01
1-4			1.25395E+02	0.00000E+00	2.83262E-03	1.70000E-01	3.90100E-01
1-5			3.26714E+02	0.00000E+00	2.26316E-03	6.56100E-02	1.50100E-01
1-6			1.31515E+02	0.00000E+00	3.78212E-03	1.61400E-01	3.71200E-01
1-7			5.34756E+03	0.00000E+00	4.22618E-03	4.02300E-03	9.18200E-03
1-8			9.20928E+02	0.00000E+00	3.87946E-03	2.28700E-02	5.28300E-02
1-1	MED	HI	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-2			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-3			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-4			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-5			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-6			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-7			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-8			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-1	LO	LO	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-2			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-3			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-4			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-5			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-6			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-7			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-8			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-1	LO	HI	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-2			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-3			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-4			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-5			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-6			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-7			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-8			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00



**CIRRIS 1A Radiometer Linearity Coefficients**  
(focal plane 1, filter 2, bandpass, linear fit)

DET	BIAS	GAIN	A1	A2	S.D.	MIN. VOLT.	MAX. VOLT.
1-1	HI	LO	1.33714E+01	-1.34651E+00	1.97620E-04	5.90900E-04	1.59300E+00
1-2			7.25076E+00	-7.30156E-01	1.97613E-04	5.90900E-04	1.59300E+00
1-3			1.80019E+01	-1.81282E+00	1.97455E-04	5.90900E-04	1.59300E+00
1-4			6.90067E+00	-6.94871E-01	1.98314E-04	5.90900E-04	1.59300E+00
1-5			1.82020E+01	-1.83299E+00	1.97327E-04	5.90900E-04	1.59300E+00
1-6			7.40082E+00	-7.45290E-01	1.97228E-04	5.90900E-04	1.59300E+00
1-7			2.99033E+02	-3.01135E+01	1.97265E-04	5.90900E-04	1.59300E+00
1-8			6.00063E+01	-6.04266E+00	1.97633E-04	5.90900E-04	1.59300E+00
1-1	HI	HI	1.38014E-01	-1.38979E-02	1.97872E-04	5.90900E-04	1.59300E+00
1-2			7.20077E-02	-7.25131E-03	1.97468E-04	5.90900E-04	1.59300E+00
1-3			1.80019E-01	-1.81278E-02	1.97757E-04	5.90900E-04	1.59300E+00
1-4			7.10068E-02	-7.15008E-03	1.98484E-04	5.90900E-04	1.59300E+00
1-5			1.87020E-01	-1.88330E-02	1.97654E-04	5.90900E-04	1.59300E+00
1-6			7.40080E-02	-7.45275E-03	1.97410E-04	5.90900E-04	1.59300E+00
1-7			3.00033E+00	-3.02140E-01	1.97367E-04	5.90900E-04	1.59300E+00
1-8			6.50067E-01	-6.54615E-02	1.97751E-04	5.90900E-04	1.59300E+00
1-1	MED	LO	1.11696E+02	0.00000E+00	3.21374E-03	1.16300E-01	6.17400E-01
1-2			6.13877E+01	0.00000E+00	3.01686E-03	2.13800E-01	1.12600E+00
1-3			1.31834E+02	0.00000E+00	4.19463E-03	9.78100E-02	5.22300E-01
1-4			5.77732E+01	0.00000E+00	8.64858E-03	2.25400E-01	1.19600E+00
1-5			1.43980E+02	0.00000E+00	1.38927E-03	9.06200E-02	4.79400E-01
1-6			5.99653E+01	0.00000E+00	5.20095E-03	4.03800E-01	1.81500E+00
1-7			2.55910E+03	0.00000E+00	1.60595E-03	9.25800E-03	4.23100E-02
1-8			4.42348E+02	0.00000E+00	3.37276E-03	5.17800E-02	2.42900E-01
1-1	MED	HI	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-2			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-3			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-4			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-5			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-6			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-7			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-8			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-1	LO	LO	1.04860E+03	0.00000E+00	9.60681E-03	1.02700E-01	1.11300E+00
1-2			5.78827E+02	0.00000E+00	1.80986E-03	1.87400E-01	2.03100E+00
1-3			1.26108E+03	0.00000E+00	5.18505E-03	8.61500E-02	9.31900E-01
1-4			5.34755E+02	0.00000E+00	4.64426E-03	1.98000E-01	2.19400E+00
1-5			1.33989E+03	0.00000E+00	6.63744E-03	7.98600E-02	8.74100E-01
1-6			5.64736E+02	0.00000E+00	5.48157E-03	3.00000E-01	2.08800E+00
1-7			2.32690E+04	0.00000E+00	4.17668E-03	7.08400E-03	5.03600E-02
1-8			4.01611E+03	0.00000E+00	5.35184E-03	4.09500E-02	2.92500E-01
1-1	LO	HI	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-2			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-3			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-4			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-5			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-6			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-7			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-8			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

**CIRRIS 1A Radiometer Linearity Coefficients**  
(focal plane 1, filter 3, bandpass, linear fit)

DET	BIAS	GAIN	A1	A2	S.D.	MIN. VOLT.	MAX. VOLT.
1-1	HI	LO	9.24095E+00	-9.30558E-01	1.97804E-04	5.90900E-04	1.59300E+00
1-2			5.10054E+00	-5.13630E-01	1.97565E-04	5.90900E-04	1.59300E+00
1-3			1.19013E+01	-1.19850E+00	1.97282E-04	5.90900E-04	1.59300E+00
1-4			4.72049E+00	-4.75355E-01	1.97683E-04	5.90900E-04	1.59300E+00
1-5			1.18013E+01	-1.18845E+00	1.97075E-04	5.90900E-04	1.59300E+00
1-6			4.85057E+00	-4.88485E-01	1.96858E-04	5.90900E-04	1.59300E+00
1-7			2.00020E+02	-2.01415E+01	1.98138E-04	5.90900E-04	1.59300E+00
1-8			4.20044E+01	-4.22984E+00	1.97709E-04	5.90900E-04	1.59300E+00
1-1	HI	HI	1.00011E-01	-1.00713E-02	1.97397E-04	5.90900E-04	1.59300E+00
1-2			5.50060E-02	-5.53925E-03	1.97351E-04	5.90900E-04	1.59300E+00
1-3			1.28014E-01	-1.28911E-02	1.97547E-04	5.90900E-04	1.59300E+00
1-4			5.00054E-02	-5.03565E-03	1.97397E-04	5.90900E-04	1.59300E+00
1-5			1.26014E-01	-1.26902E-02	1.97119E-04	5.90900E-04	1.59300E+00
1-6			5.10053E-02	-5.13625E-03	1.97680E-04	5.90900E-04	1.59300E+00
1-7			2.05020E+00	-2.06449E-01	1.98214E-04	5.90900E-04	1.59300E+00
1-8			4.60049E-01	-4.63273E-02	1.97570E-04	5.90900E-04	1.59300E+00
1-1	MED	LO	7.64607E+01	0.00000E+00	4.13072E-03	1.24000E-01	8.06100E-01
1-2			4.33221E+01	0.00000E+00	2.41812E-03	2.24700E-01	1.42900E+00
1-3			8.56132E+01	0.00000E+00	1.11518E-02	1.12200E-01	7.20600E-01
1-4			3.96118E+01	0.00000E+00	2.80515E-03	2.49300E-01	1.56700E+00
1-5			9.16161E+01	0.00000E+00	4.00900E-03	1.04700E-01	6.73900E-01
1-6			3.93271E+01	0.00000E+00	7.89901E-03	2.53600E-01	1.58100E+00
1-7			1.66104E+03	0.00000E+00	2.68353E-03	5.92200E-03	3.73200E-02
1-8			3.06200E+02	0.00000E+00	3.60119E-03	3.09200E-02	2.01200E-01
1-1	MED	HI	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-2			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-3			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-4			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-5			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-6			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-7			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-8			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-1	LO	LO	7.38846E+02	0.00000E+00	2.16146E-02	1.38100E-01	2.03100E+00
1-2			4.09153E+02	0.00000E+00	6.01879E-04	2.46500E-01	2.17100E+00
1-3			8.39453E+02	0.00000E+00	1.66609E-02	1.21900E-01	2.27900E+00
1-4			3.71243E+02	0.00000E+00	4.36598E-03	2.73600E-01	2.39200E+00
1-5			8.91141E+02	0.00000E+00	2.44889E-02	1.15000E-01	2.15500E+00
1-6			3.74388E+02	0.00000E+00	6.49464E-03	2.74600E-01	2.38600E+00
1-7			1.52544E+04	0.00000E+00	9.91429E-03	6.59300E-03	1.58200E-01
1-8			2.80288E+03	0.00000E+00	2.98728E-03	3.57400E-02	8.61300E-01
1-1	LO	HI	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-2			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-3			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-4			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-5			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-6			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-7			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-8			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

**CIRRIS 1A Radiometer Linearity Coefficients**  
(focal plane 1, filter 5, bandpass, linear fit)

DET	BIAS	GAIN	A1	A2	S.D.	MIN. VOLT.	MAX. VOLT.
1-1	HI	LO	4.70050E+00	-4.73345E-01	1.97572E-04	5.90900E-04	1.59300E+00
1-2			2.62027E+00	-2.63858E-01	1.97887E-04	5.90900E-04	1.59300E+00
1-3			5.70063E+00	-5.74074E-01	1.97235E-04	5.90900E-04	1.59300E+00
1-4			2.44027E+00	-2.45745E-01	1.97171E-04	5.90900E-04	1.59300E+00
1-5			5.90067E+00	-5.94225E-01	1.97075E-04	5.90900E-04	1.59300E+00
1-6			2.45028E+00	-2.46758E-01	1.96919E-04	5.90900E-04	1.59300E+00
1-7			9.20098E+01	-9.26551E+00	1.97514E-04	5.90900E-04	1.59300E+00
1-8			2.10022E+01	-2.11492E+00	1.97709E-04	5.90900E-04	1.59300E+00
1-1	HI	HI	5.15055E-02	-5.18668E-03	1.97471E-04	5.90900E-04	1.59300E+00
1-2			2.95031E-02	-2.97097E-03	1.97681E-04	5.90900E-04	1.59300E+00
1-3			6.30071E-02	-6.34508E-03	1.97119E-04	5.90900E-04	1.59300E+00
1-4			2.70029E-02	-2.71922E-03	1.97529E-04	5.90900E-04	1.59300E+00
1-5			6.50073E-02	-6.54648E-03	1.97123E-04	5.90900E-04	1.59300E+00
1-6			2.70029E-02	-2.71922E-03	1.97529E-04	5.90900E-04	1.59300E+00
1-7			9.70109E-01	-9.76943E-02	1.97145E-04	5.90900E-04	1.59300E+00
1-8			2.45026E-01	-2.46745E-02	1.97475E-04	5.90900E-04	1.59300E+00
1-1	MED	LO	3.76153E+01	0.00000E+00	6.88971E-03	1.31600E-01	6.84200E-01
1-2			2.16678E+01	0.00000E+00	5.06421E-03	2.31200E-01	1.19100E+00
1-3			3.99215E+01	0.00000E+00	9.31075E-03	1.21600E-01	6.41800E-01
1-4			1.96088E+01	0.00000E+00	5.30408E-03	2.56300E-01	1.31700E+00
1-5			4.42227E+01	0.00000E+00	8.62833E-03	1.10300E-01	5.79700E-01
1-6			1.90596E+01	0.00000E+00	6.37522E-03	2.64900E-01	1.35700E+00
1-7			7.68690E+02	0.00000E+00	9.28259E-03	6.50100E-03	3.35500E-02
1-8			1.52497E+02	0.00000E+00	6.48132E-03	3.15900E-02	1.67900E-01
1-1	MED	HI	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-2			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-3			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-4			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-5			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-6			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-7			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-8			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-1	LO	LO	3.61336E+02	0.00000E+00	9.55926E-03	1.17700E-01	2.19700E+00
1-2			2.06561E+02	0.00000E+00	4.32410E-03	2.06700E-01	2.62000E+00
1-3			3.94388E+02	0.00000E+00	1.90992E-02	1.09000E-01	2.41600E+00
1-4			1.86299E+02	0.00000E+00	8.65719E-03	2.29400E-01	2.32800E+00
1-5			4.32396E+02	0.00000E+00	1.42712E-02	9.88200E-02	2.19900E+00
1-6			1.83914E+02	0.00000E+00	9.96345E-03	2.35500E-01	2.34700E+00
1-7			7.15619E+03	0.00000E+00	9.91052E-03	5.85000E-03	2.10900E-01
1-8			1.42175E+03	0.00000E+00	3.34997E-03	2.97100E-02	1.07600E+00
1-1	LO	HI	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-2			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-3			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-4			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-5			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-6			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-7			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-8			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

**CIRRIS 1A Radiometer Linearity Coefficients**  
(focal plane 1, filter 6, bandpass, linear fit)

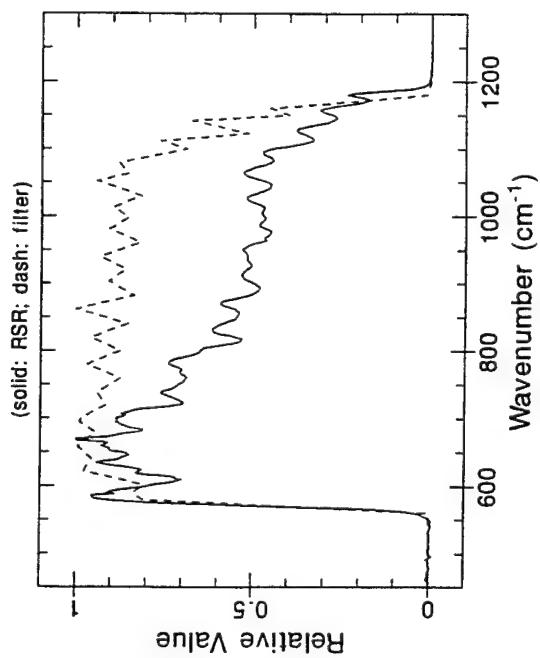
DET	BIAS	GAIN	A1	A2	S.D.	MIN. VOLT.	MAX. VOLT.
1-1	HI	LO	2.74029E+00	-2.75951E-01	1.97556E-04	5.90900E-04	1.59300E+00
1-2			1.43015E+00	-1.44020E-01	1.97396E-04	5.90900E-04	1.59300E+00
1-3			3.07035E+00	-3.09198E-01	1.97079E-04	5.90900E-04	1.59300E+00
1-4			1.40015E+00	-1.40995E-01	1.97646E-04	5.90900E-04	1.59300E+00
1-5			3.58042E+00	-3.60570E-01	1.96903E-04	5.90900E-04	1.59300E+00
1-6			1.35015E+00	-1.35968E-01	1.96995E-04	5.90900E-04	1.59300E+00
1-7			5.10051E+01	-5.13611E+00	1.98007E-04	5.90900E-04	1.59300E+00
1-8			1.18013E+01	-1.18845E+00	1.97075E-04	5.90900E-04	1.59300E+00
1-1	HI	HI	2.85028E-02	-2.87014E-03	1.98150E-04	5.90900E-04	1.59300E+00
1-2			1.70018E-02	-1.71211E-03	1.97481E-04	5.90900E-04	1.59300E+00
1-3			3.20034E-02	-3.22278E-03	1.97547E-04	5.90900E-04	1.59300E+00
1-4			1.75020E-02	-1.76257E-03	1.96884E-04	5.90900E-04	1.59300E+00
1-5			3.75039E-02	-3.77662E-03	1.97761E-04	5.90900E-04	1.59300E+00
1-6			1.40015E-02	-1.41000E-03	1.97258E-04	5.90900E-04	1.59300E+00
1-7			5.30059E-01	-5.33787E-02	1.97195E-04	5.90900E-04	1.59300E+00
1-8			1.25014E-01	-1.25892E-02	1.97349E-04	5.90900E-04	1.59300E+00
1-1	MED	LO	2.09710E+01	0.00000E+00	2.34889E-02	1.08100E-01	6.76200E-01
1-2			1.17344E+01	0.00000E+00	1.97782E-02	2.01900E-01	1.22000E+00
1-3			2.17983E+01	0.00000E+00	1.91173E-02	1.04800E-01	6.53400E-01
1-4			1.11109E+01	0.00000E+00	2.06169E-02	2.12000E-01	1.29100E+00
1-5			2.60926E+01	0.00000E+00	1.77302E-02	8.87200E-02	5.47200E-01
1-6			1.10344E+01	0.00000E+00	3.33182E-02	4.05000E-01	1.87000E+00
1-7			4.13411E+02	0.00000E+00	3.41095E-02	9.18700E-03	4.79800E-02
1-8			8.49784E+01	0.00000E+00	2.21705E-02	4.85000E-02	2.38800E-01
1-1	MED	HI	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-2			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-3			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-4			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-5			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-6			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-7			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-8			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-1	LO	LO	2.37092E+02	0.00000E+00	5.11210E-02	1.31600E-01	2.37400E+00
1-2			1.25615E+02	0.00000E+00	3.61761E-02	1.76800E-01	2.33900E+00
1-3			2.46703E+02	0.00000E+00	5.46204E-02	1.26100E-01	2.29800E+00
1-4			1.19401E+02	0.00000E+00	4.34231E-02	1.82600E-01	2.46300E+00
1-5			2.91423E+02	0.00000E+00	5.23084E-02	1.39300E-01	1.94100E+00
1-6			1.12079E+02	0.00000E+00	3.31469E-02	2.71300E-01	2.00200E+00
1-7			4.63155E+03	0.00000E+00	4.69627E-02	1.48200E-02	4.47100E-01
1-8			9.07261E+02	0.00000E+00	5.90044E-02	3.45300E-02	2.26300E+00
1-1	LO	HI	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-2			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-3			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-4			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-5			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-6			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-7			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-8			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

**CIRRIS 1A Radiometer Linearity Coefficients**  
(focal plane 1, filter 7, bandpass, linear fit)

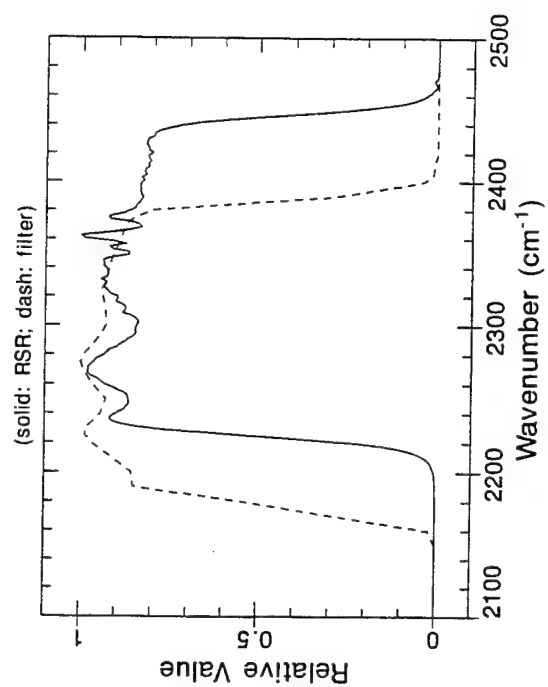
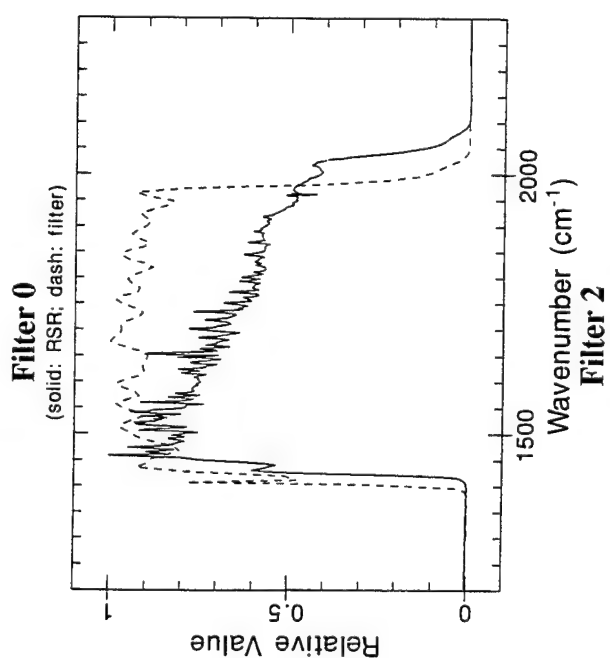
DET	BIAS	GAIN	A1	A2	S.D.	MIN. VOLT.	MAX. VOLT.
1-1	HI	LO	4.93058E+00	-4.96540E-01	1.96893E-04	5.90900E-04	1.59300E+00
1-2			2.59029E+00	-2.60854E-01	1.97106E-04	5.90900E-04	1.59300E+00
1-3			6.10067E+00	-6.14355E-01	1.97291E-04	5.90900E-04	1.59300E+00
1-4			2.45028E+00	-2.46758E-01	1.96919E-04	5.90900E-04	1.59300E+00
1-5			6.28071E+00	-6.32495E-01	1.97080E-04	5.90900E-04	1.59300E+00
1-6			2.48528E+00	-2.50278E-01	1.97120E-04	5.90900E-04	1.59300E+00
1-7			1.00010E+02	-1.00708E+01	1.98138E-04	5.90900E-04	1.59300E+00
1-8			2.27022E+01	-2.28602E+00	1.98375E-04	5.90900E-04	1.59300E+00
1-1	HI	HI	5.20054E-02	-5.23694E-03	1.97785E-04	5.90900E-04	1.59300E+00
1-2			2.87031E-02	-2.89046E-03	1.97414E-04	5.90900E-04	1.59300E+00
1-3			6.35065E-02	-6.39504E-03	1.97887E-04	5.90900E-04	1.59300E+00
1-4			2.53027E-02	-2.54804E-03	1.97436E-04	5.90900E-04	1.59300E+00
1-5			6.53071E-02	-6.57660E-03	1.97350E-04	5.90900E-04	1.59300E+00
1-6			2.65027E-02	-2.66882E-03	1.97733E-04	5.90900E-04	1.59300E+00
1-7			1.05011E+00	-1.05746E-01	1.97716E-04	5.90900E-04	1.59300E+00
1-8			2.40026E-01	-2.41713E-02	1.97319E-04	5.90900E-04	1.59300E+00
1-1	MED	LO	4.02599E+01	0.00000E+00	8.52661E-03	7.12500E-02	2.64800E-01
1-2			2.22169E+01	0.00000E+00	5.83285E-03	1.30000E-01	4.80900E-01
1-3			4.40717E+01	0.00000E+00	6.76410E-03	6.50800E-02	2.41900E-01
1-4			1.98978E+01	0.00000E+00	5.45587E-03	1.44500E-01	5.36200E-01
1-5			4.77429E+01	0.00000E+00	6.33491E-03	5.99500E-02	2.23200E-01
1-6			1.98131E+01	0.00000E+00	1.25351E-02	1.47800E-01	1.56200E+00
1-7			8.26340E+02	0.00000E+00	5.55579E-03	3.52800E-03	3.73800E-02
1-8			1.57822E+02	0.00000E+00	1.19112E-02	1.76200E-02	1.94800E-01
1-1	MED	HI	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-2			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-3			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-4			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-5			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-6			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-7			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-8			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-1	LO	LO	3.95411E+02	0.00000E+00	4.25188E-02	4.12300E-02	2.11700E+00
1-2			2.15415E+02	0.00000E+00	7.30950E-03	7.50800E-02	2.17200E+00
1-3			4.34721E+02	0.00000E+00	4.95090E-02	3.74800E-02	1.92600E+00
1-4			1.93037E+02	0.00000E+00	2.57777E-02	8.22200E-02	2.42500E+00
1-5			4.65179E+02	0.00000E+00	4.67937E-02	3.53400E-02	1.80100E+00
1-6			1.92070E+02	0.00000E+00	4.97299E-03	2.92000E-01	2.44300E+00
1-7			8.08514E+03	0.00000E+00	3.38883E-02	6.94700E-03	4.71200E-01
1-8			1.50470E+03	0.00000E+00	1.28024E-02	3.69300E-02	2.12600E+00
1-1	LO	HI	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-2			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-3			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-4			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-5			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-6			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-7			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1-8			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

**CIRRIS 1A Radiometer Linearity Coefficients**  
(focal plane 2, bandpass, linear fit)

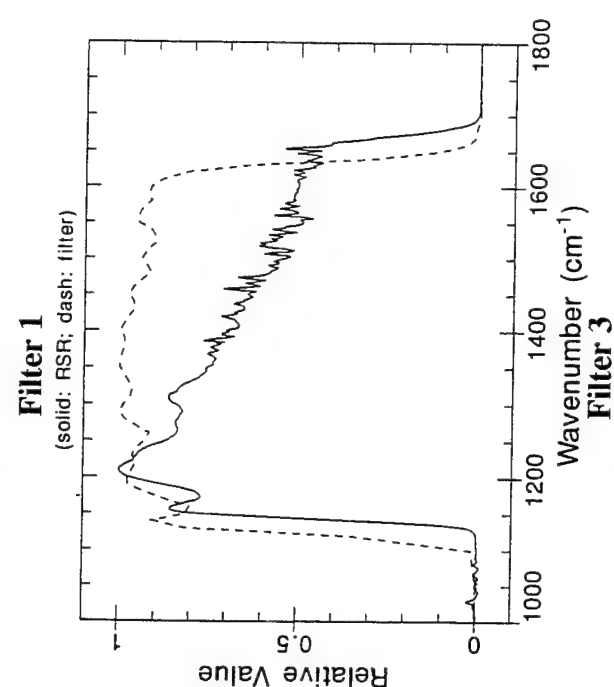
DET	BIAS	GAIN	A1	A2	S.D.	MIN. VOLT.	MAX. VOLT.
2-1	HI	LO	7.41184E+01	0.00000E+00	5.88644E-02	6.32100E-04	6.68600E-02
2-2			6.88387E+01	0.00000E+00	5.85583E-02	2.58900E-03	7.09700E-02
2-3			9.80041E+01	0.00000E+00	5.52881E-02	1.64700E-04	5.03700E-02
2-4			6.90045E+02	0.00000E+00	5.53125E-02	3.36700E-04	7.23500E-03
2-5			4.39361E+02	0.00000E+00	4.58320E-02	3.90800E-05	1.12400E-02
2-1	HI	HI	7.23608E-01	0.00000E+00	5.86193E-02	1.15300E-02	1.19700E+00
2-2			6.90780E-01	0.00000E+00	8.50120E-03	1.08200E+00	2.16200E+00
2-3			9.76887E-01	0.00000E+00	4.74408E-02	1.65800E-02	8.78600E-01
2-4			6.86356E+00	0.00000E+00	5.43467E-02	6.78200E-03	7.22400E-01
2-5			4.41210E+00	0.00000E+00	5.66832E-02	4.64700E-03	6.46900E-01
2-1	MED	LO	8.12429E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2-2			8.43696E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2-3			1.20446E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2-4			6.68579E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2-5			3.67135E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2-1	MED	HI	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2-2			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2-3			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2-4			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2-5			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2-1	LO	LO	7.57704E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2-2			7.06154E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2-3			9.33072E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2-4			5.96692E+04	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2-5			3.10857E+04	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2-1	LO	HI	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2-2			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2-3			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2-4			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2-5			0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00



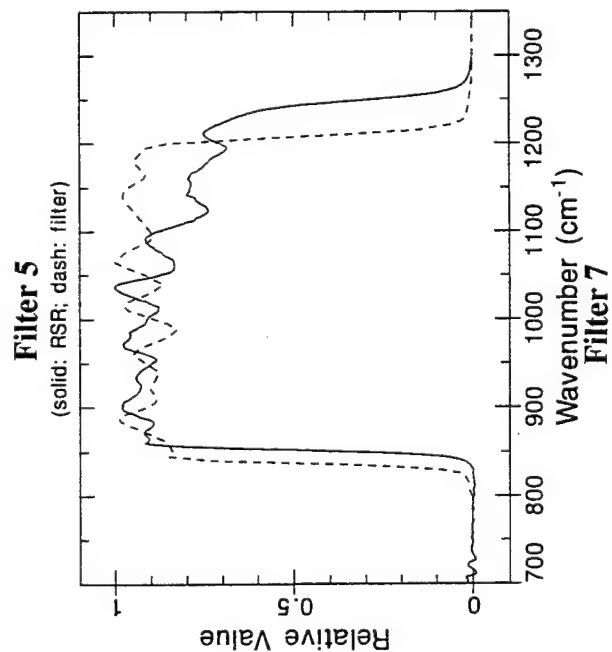
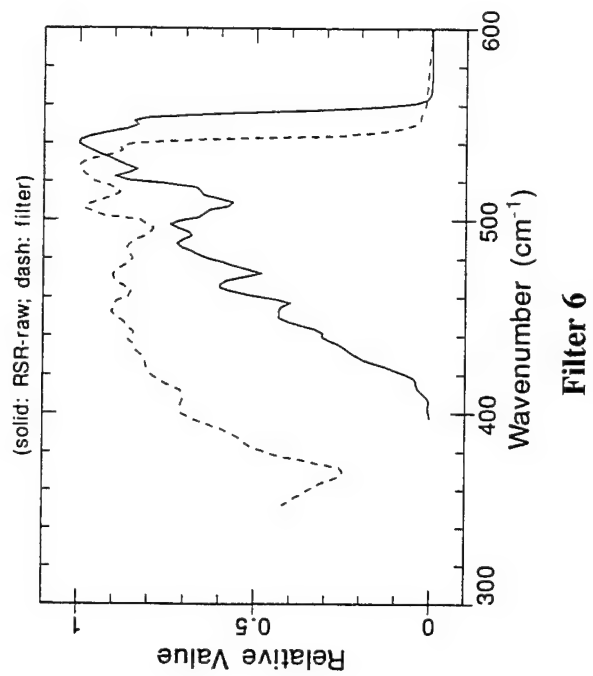
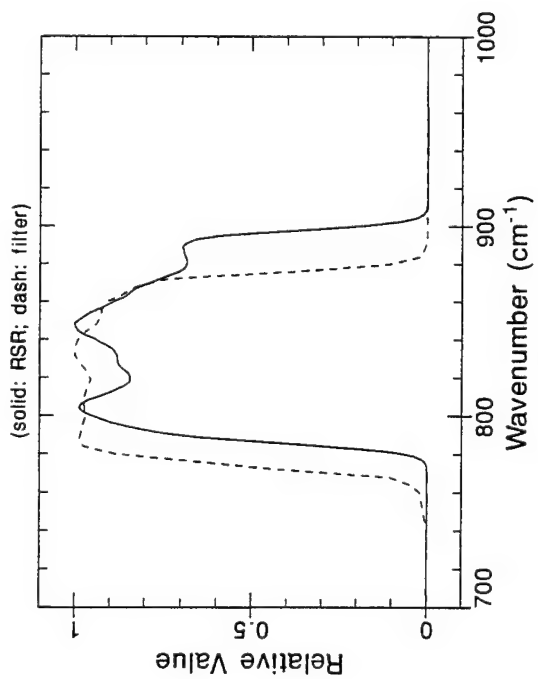
**Filter 0**



**Filter 1**

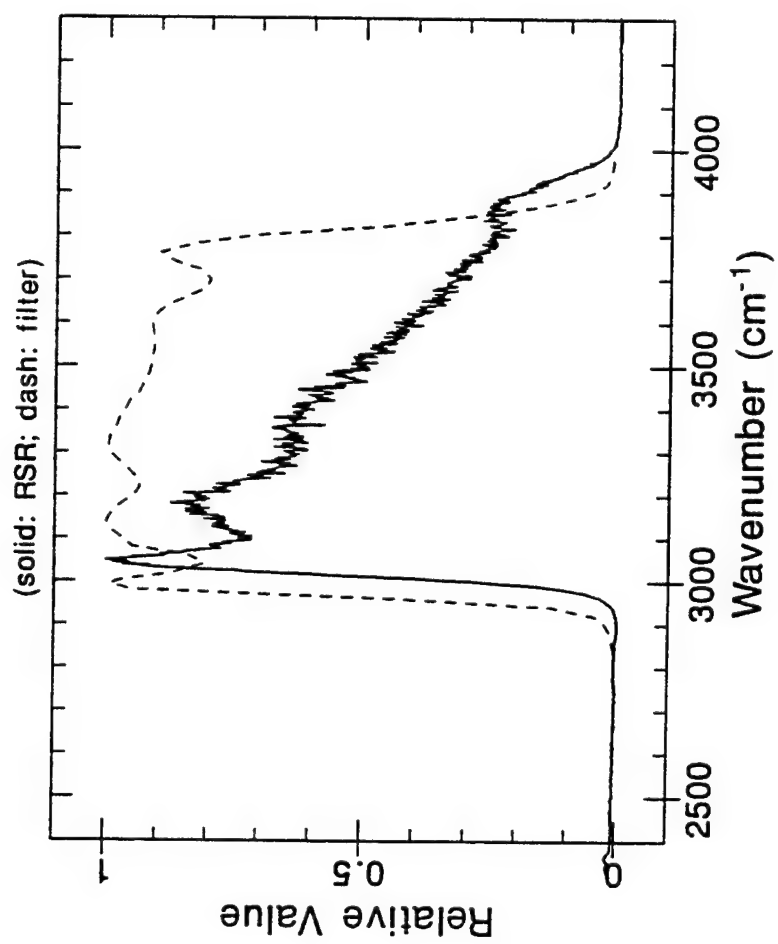


**Relative spectral response for radiometer detector 1-4.**

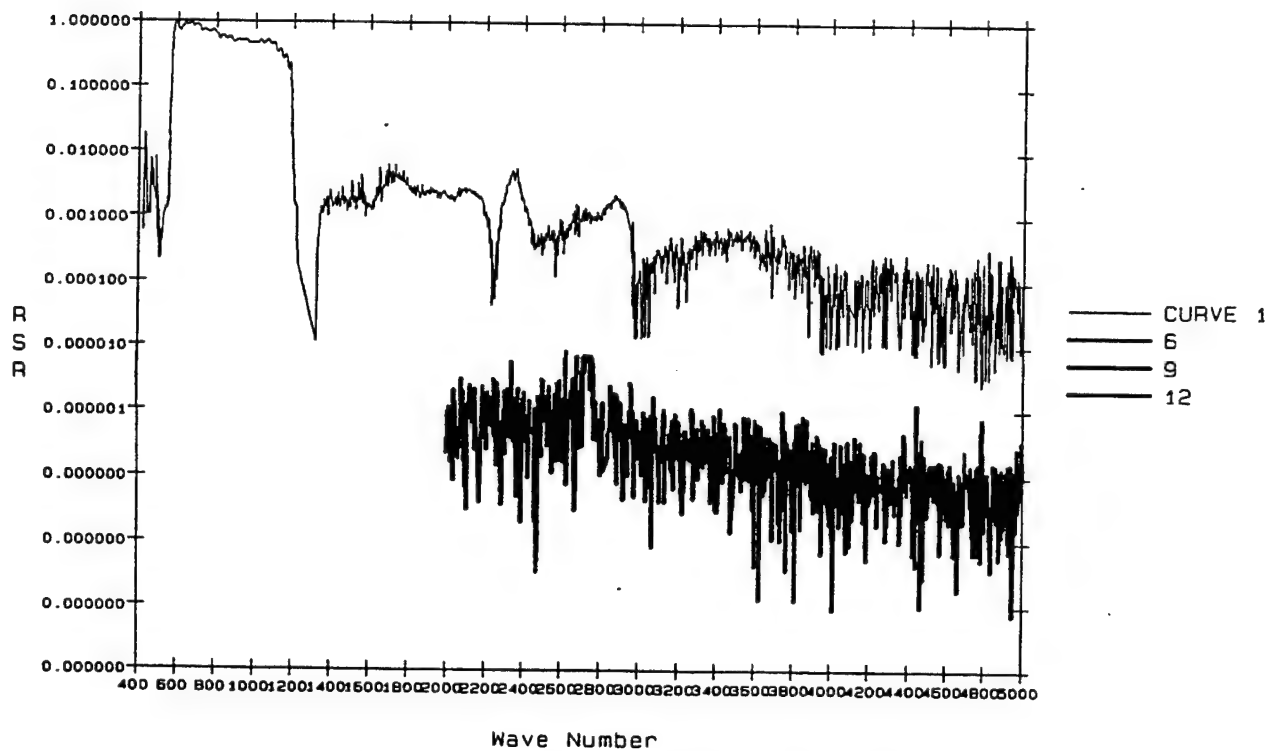


Relative spectral response for radiometer detector 1-4 (cont).

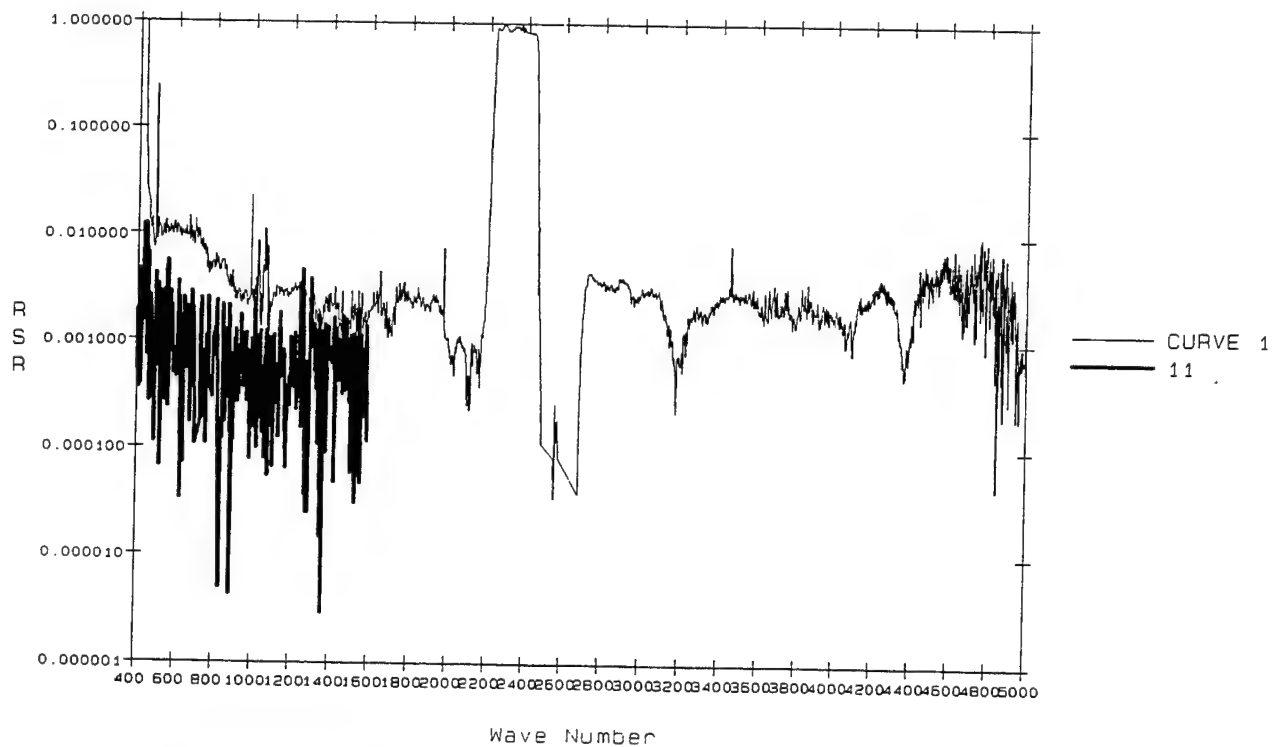




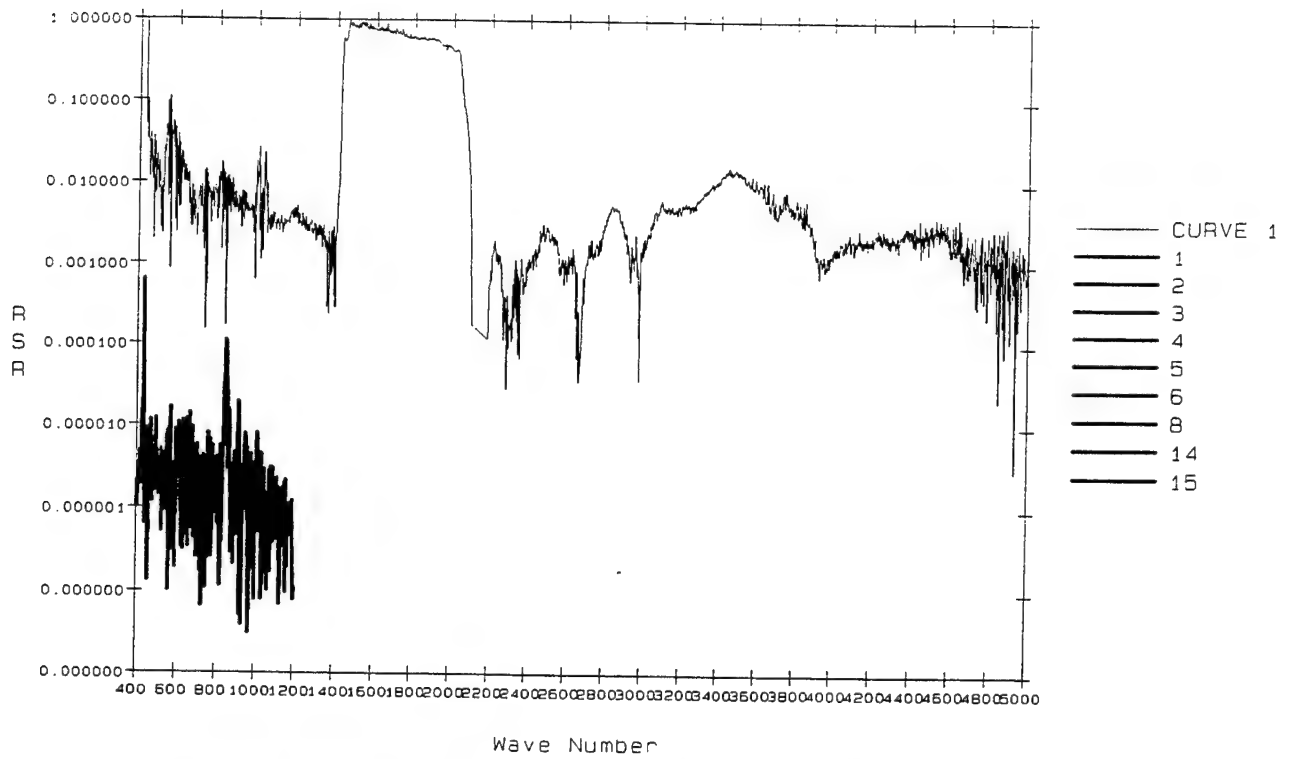
Relative spectral response for radiometer focal plane 2.



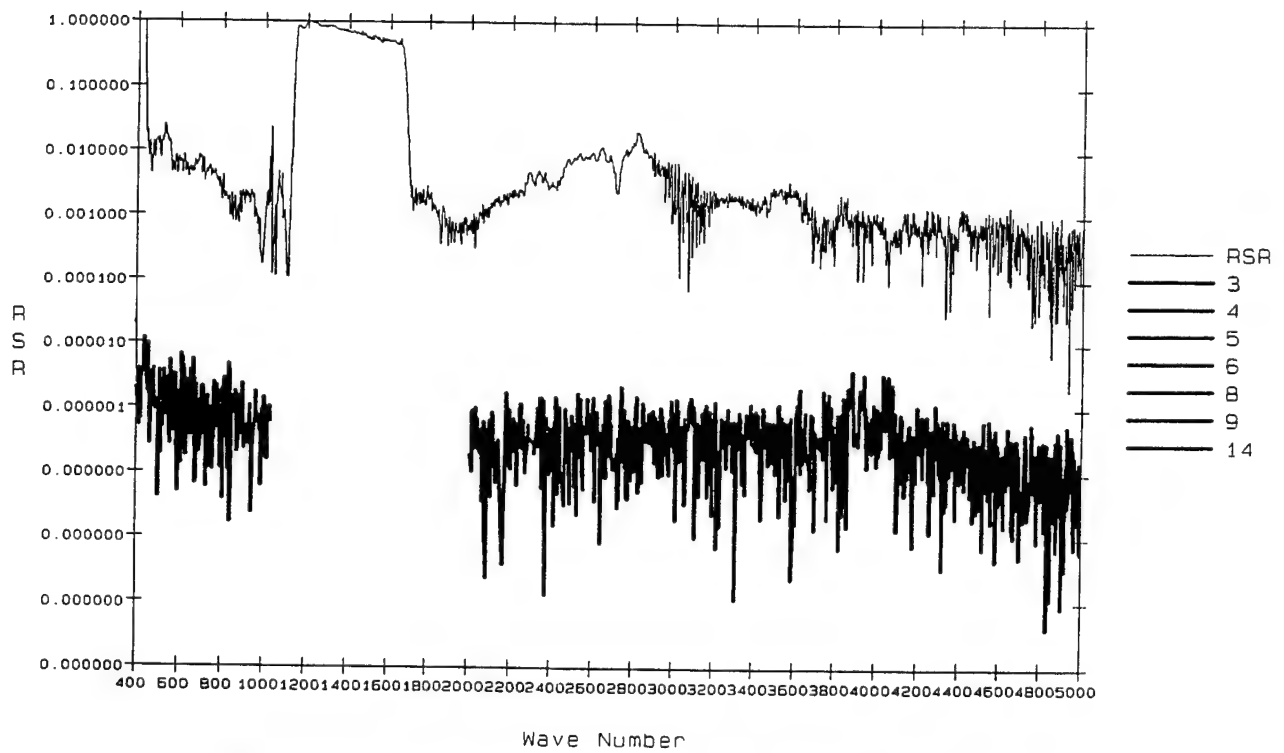
**Radiometer out-of-band rejection, focal plane 1, filter 0.**



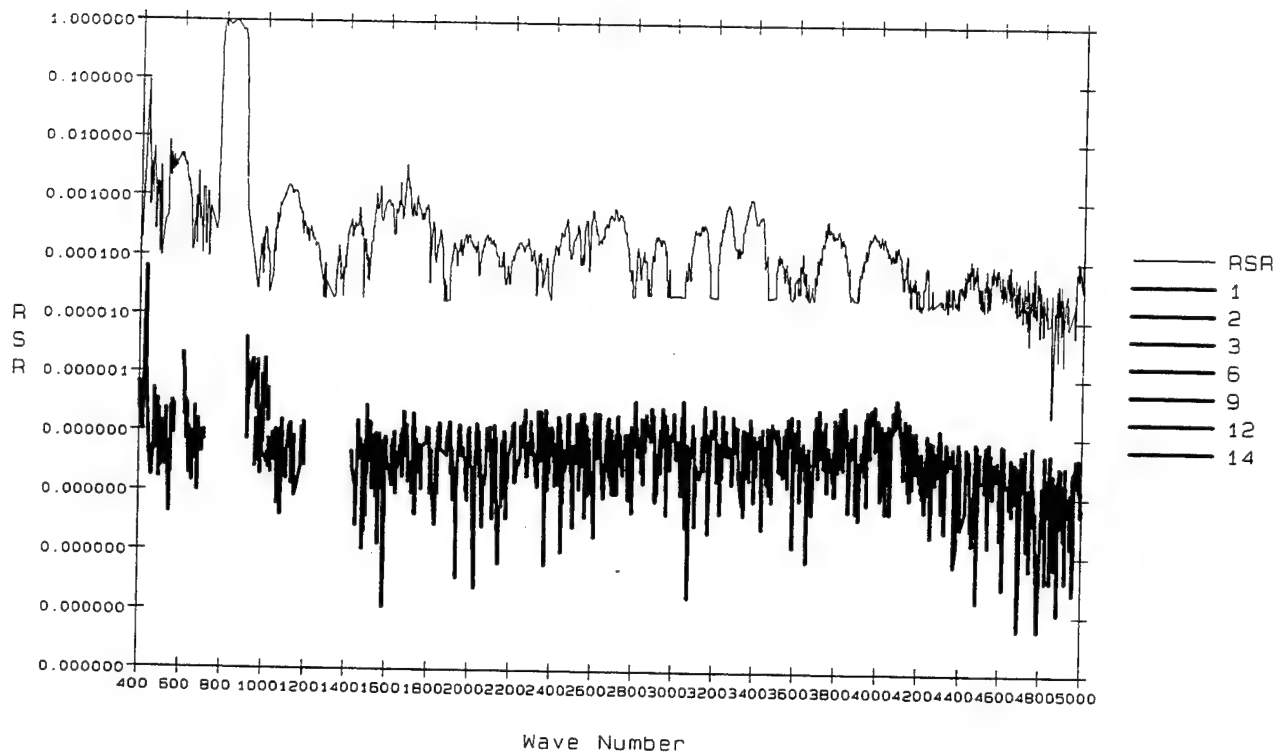
**Radiometer out-of-band rejection, focal plane 1, filter 1.**



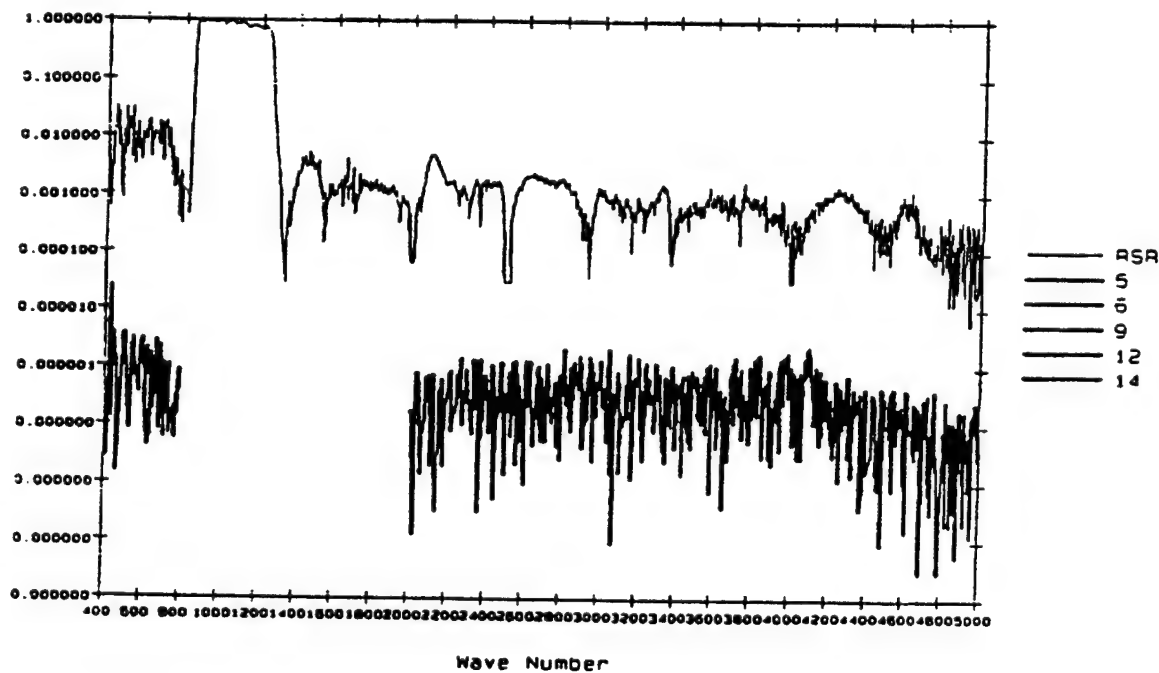
**Radiometer out-of-band rejection, focal plane 1, filter 2.**



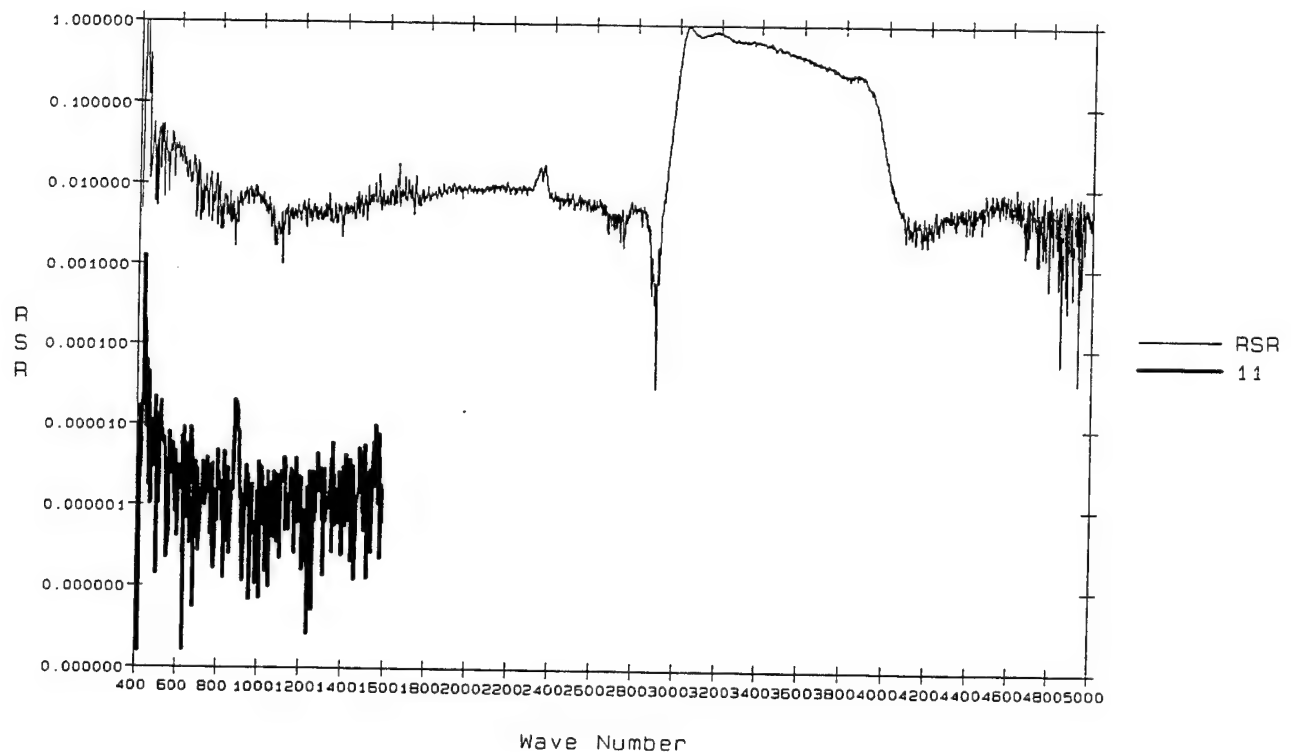
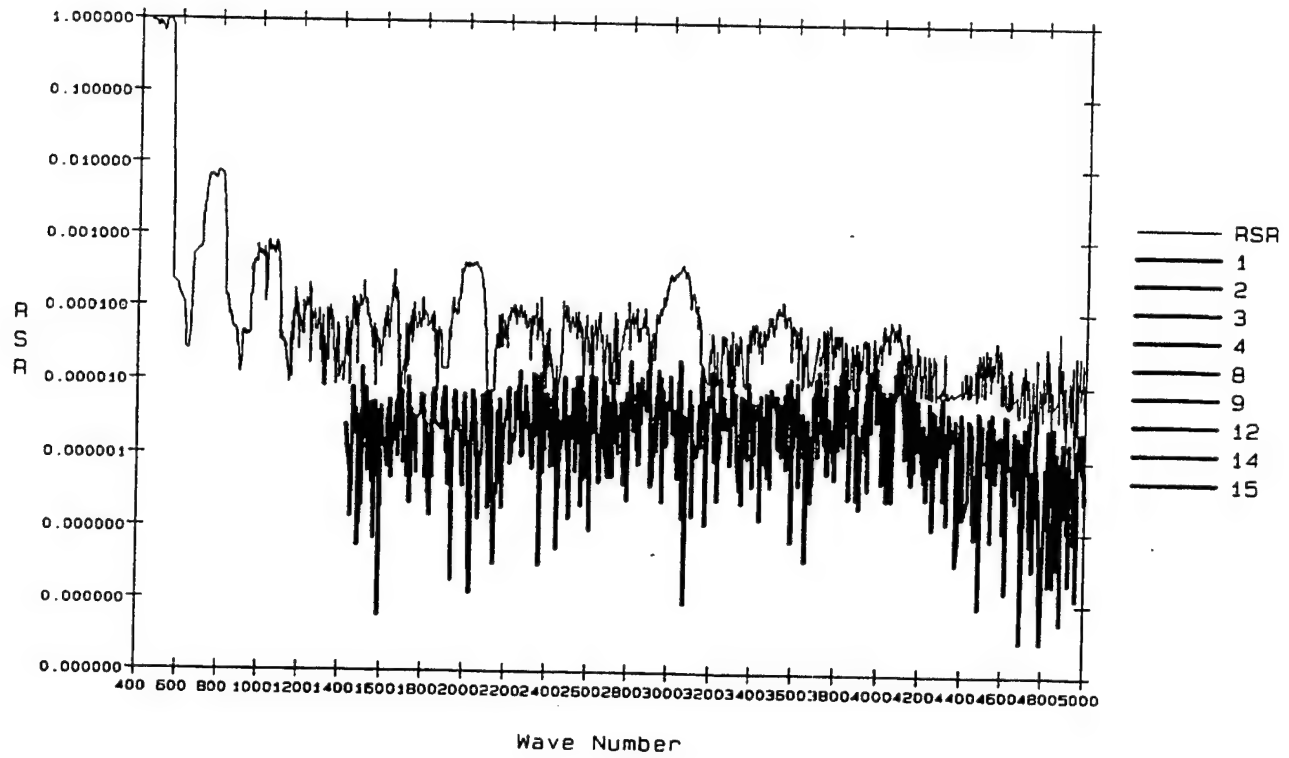
**Radiometer out-of-band rejection, focal plane 1, filter 3.**



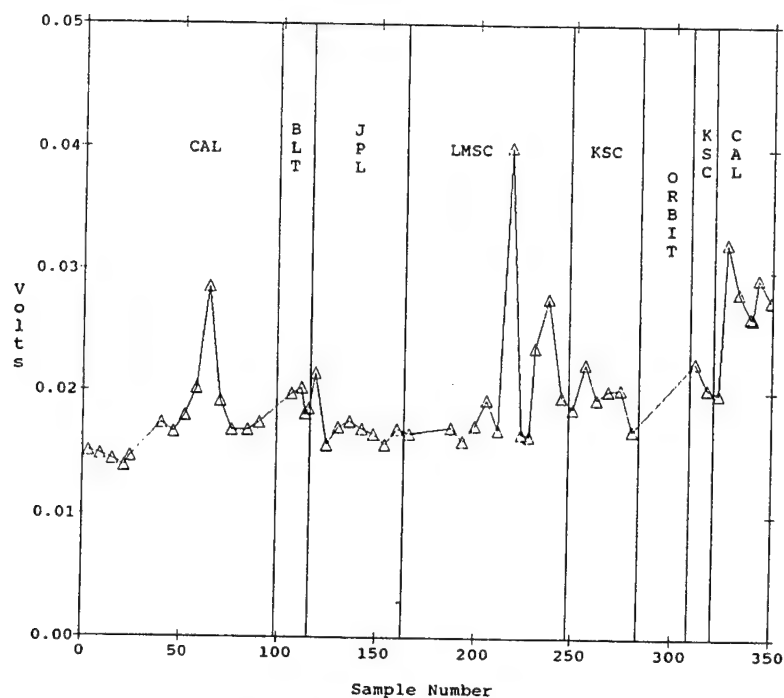
Radiometer out-of-band rejection, focal plane 1, filter 5.



Radiometer out-of-band rejection, focal plane 1, filter 7.

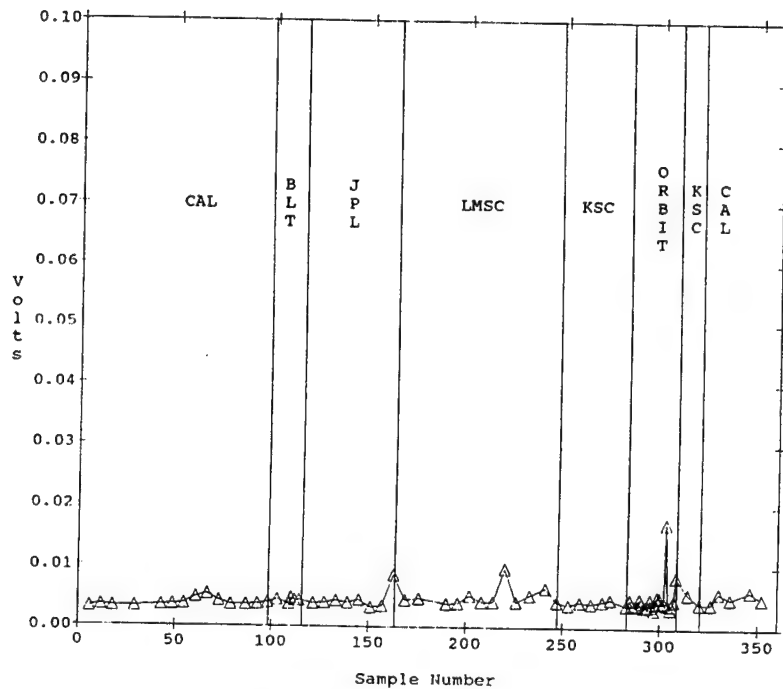


**Radiometer out-of-band rejection, focal plane 2.**



Gain = HI (x100), Bias = HHHH, FW 4, Sept 1988 - Feb 1992.

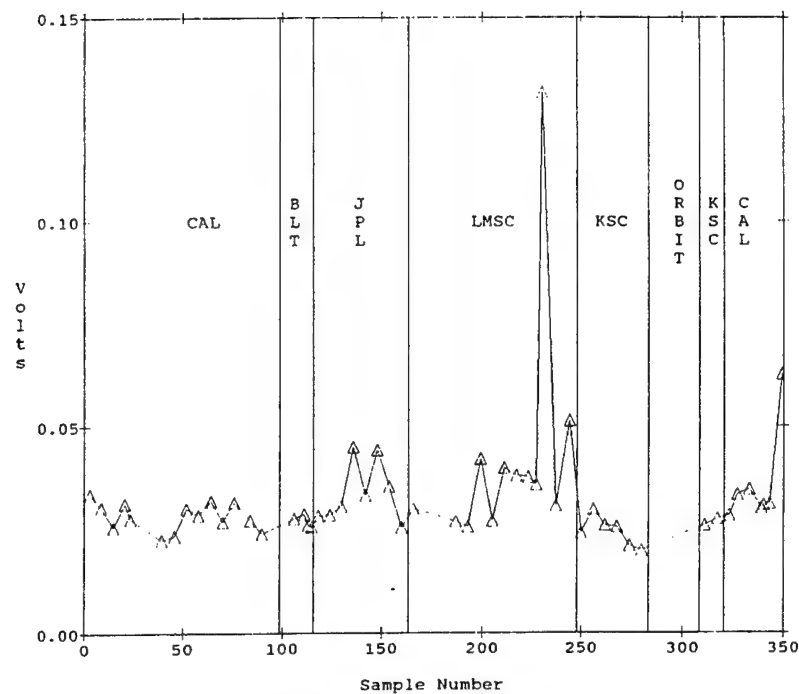
### Chopper Off



Gain = HI (x100), Bias = HHHH, FW 4, Sept 1988 - Feb 1992.

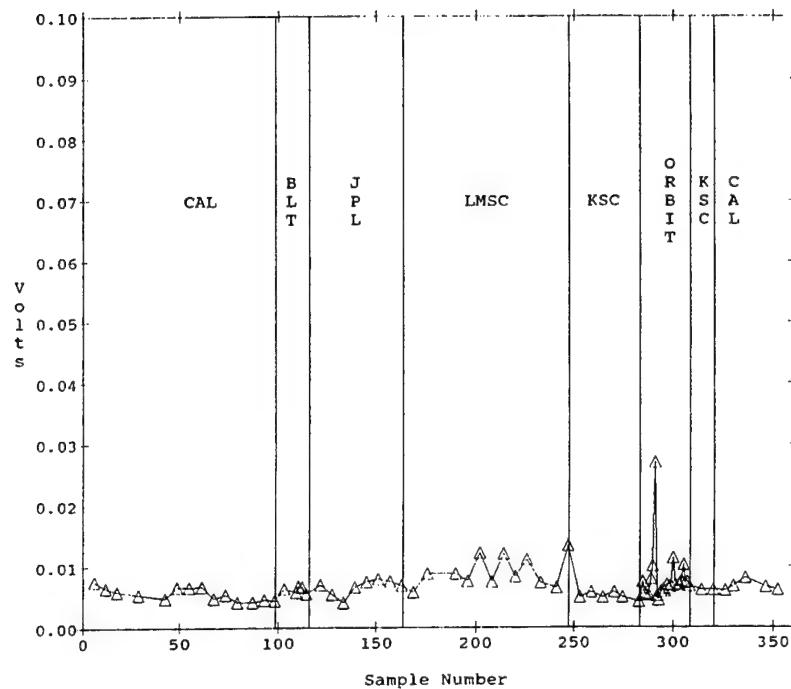
### Chopper On

RMS noise history for radiometer detector 1-1.



Gain = HI (x100), Bias = HHHH, FW 4, Sept 1988 - Feb 1992.

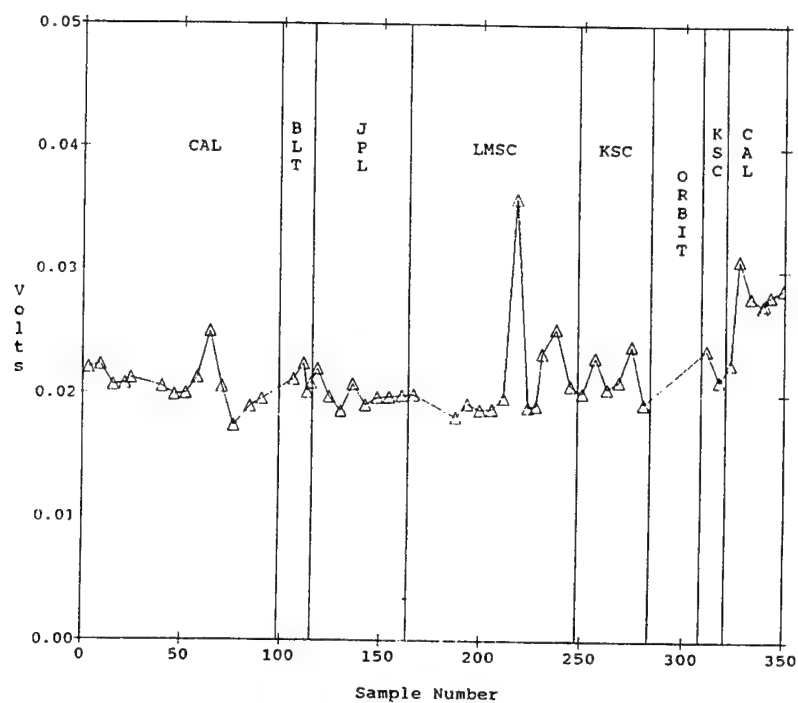
### Chopper Off



Gain = HI (x100), Bias = HHHH, FW 4, Sept 1988 - Feb 1992.

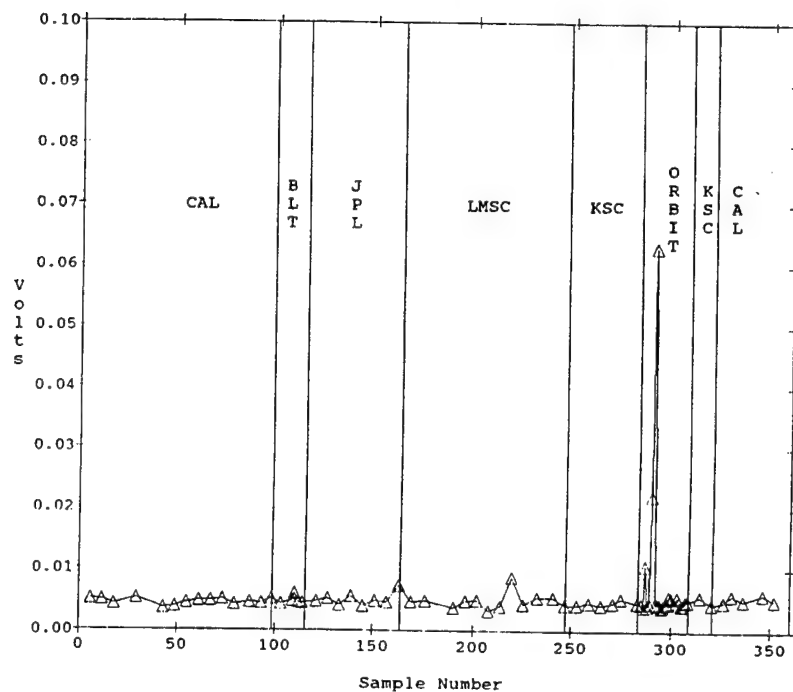
### Chopper On

RMS noise history for radiometer detector 1-2.



Gain = HI (x100), Bias = HHHH, FW 4, Sept 1988 - Feb 1992.

### Chopper Off

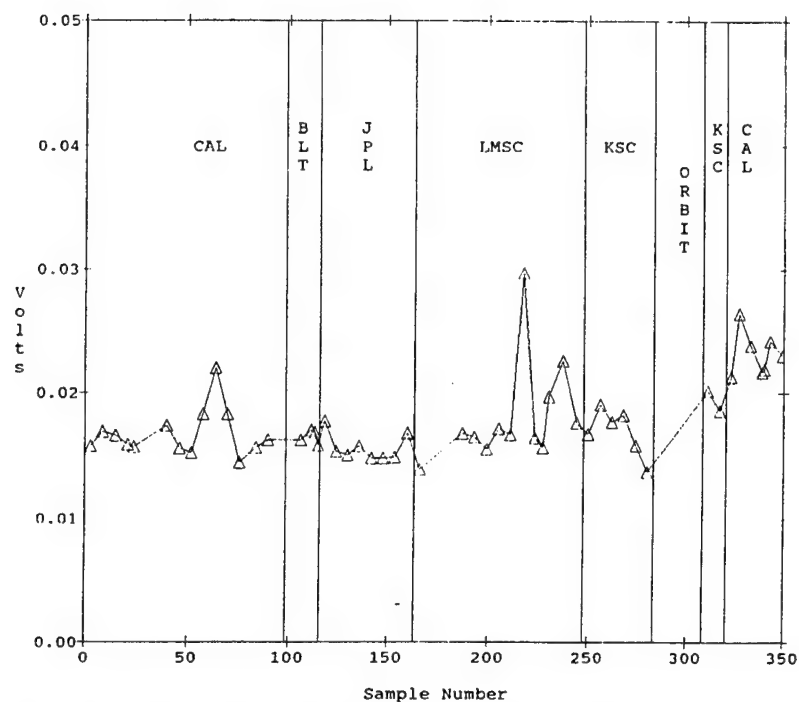


Gain = HI (x100), Bias = HHHH, FW 4, Sept 1988 - Feb 1992.

### Chopper On

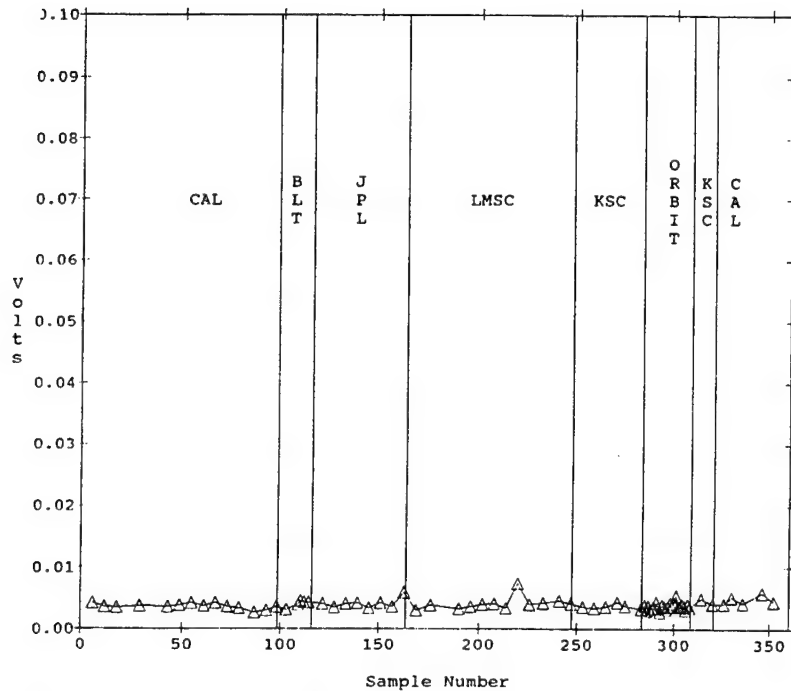
**RMS noise history for radiometer detector 1-3.**





Gain = HI (x100), Bias = HHHH, FW 4, Sept 1988 - Feb 1992.

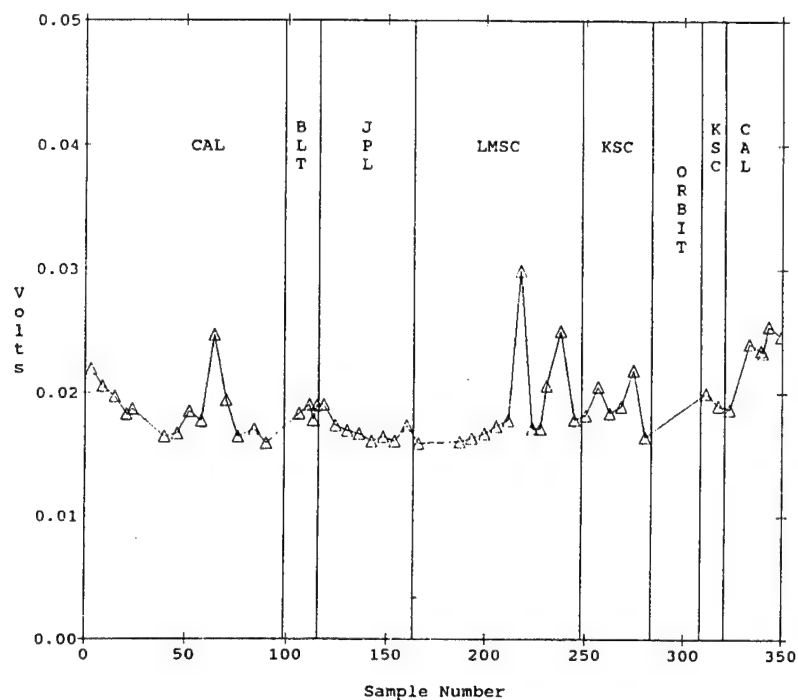
### Chopper Off



Gain = HI (x100), Bias = HHHH, FW 4, Sept 1988 - Feb 1992.

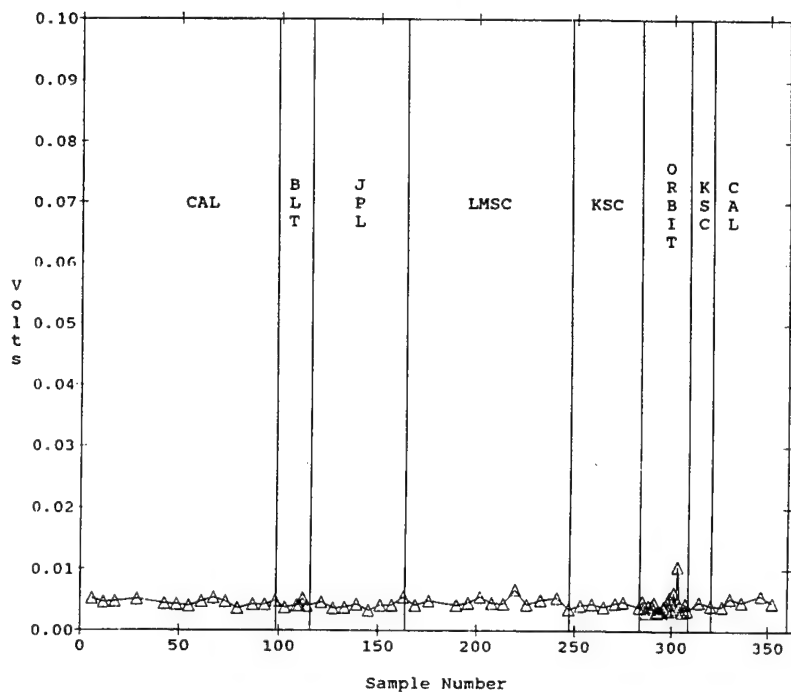
### Chopper On

**RMS noise history for radiometer detector 1-4.**



Gain = HI (x100), Bias = HHHH, FW 4, Sept 1988 - Feb 1992.

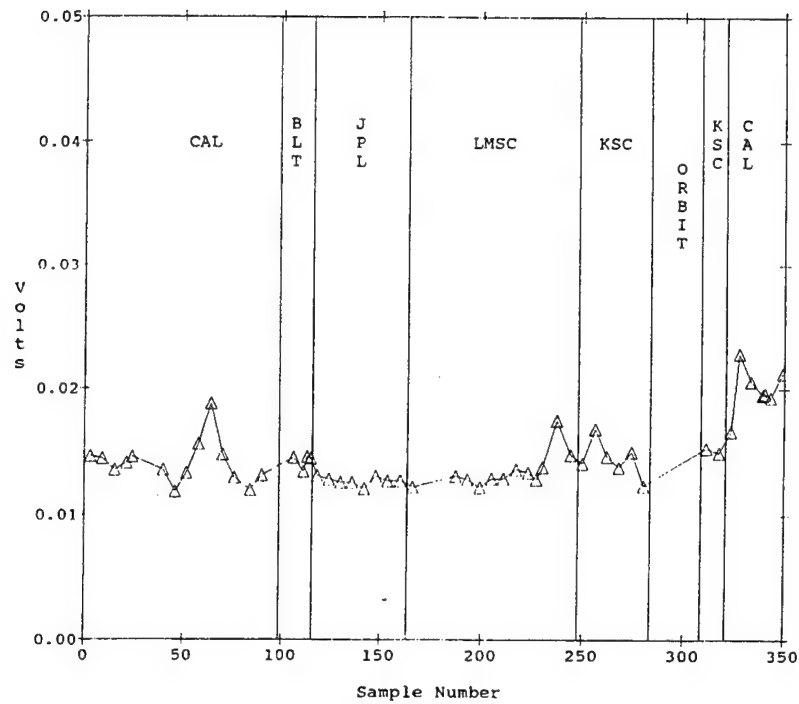
### Chopper Off



Gain = HI (x100), Bias = HHHH, FW 4, Sept 1988 - Feb 1992.

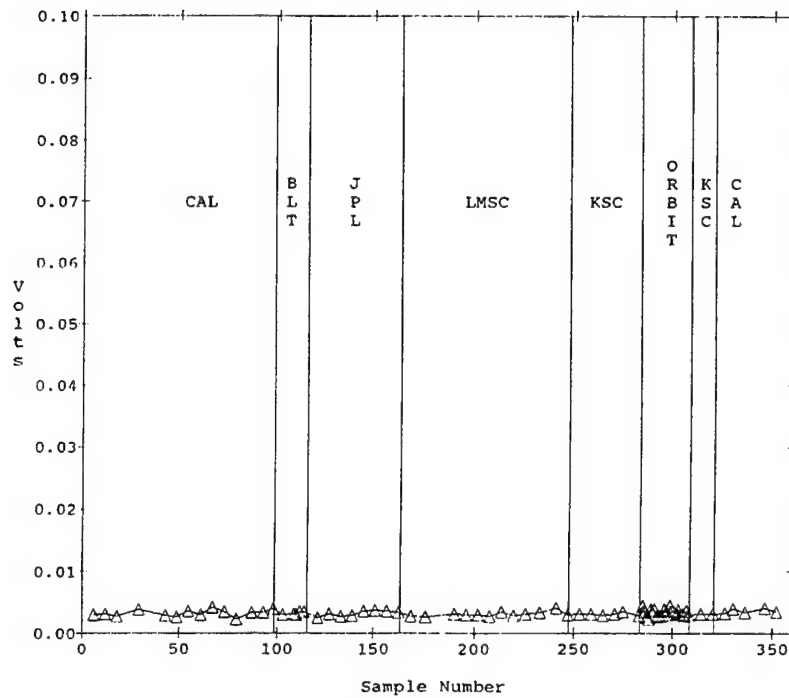
### Chopper On

**RMS noise history for radiometer detector 1-5.**



Gain = HI (x100), Bias = HHHH, FW 4, Sept 1988 - Feb 1992.

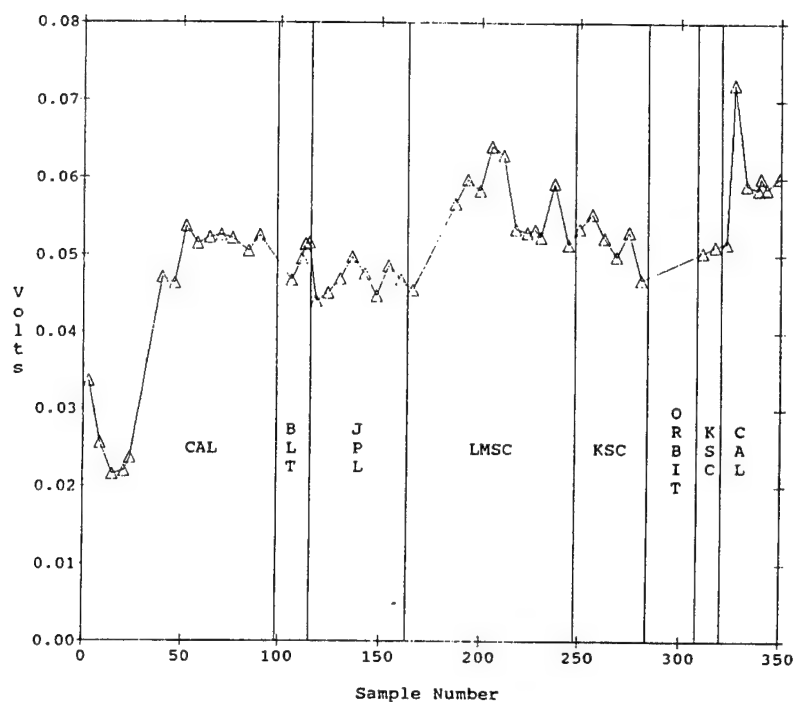
### Chopper Off



Gain = HI (x100), Bias = HHHH, FW 4, Sept 1988 - Feb 1992.

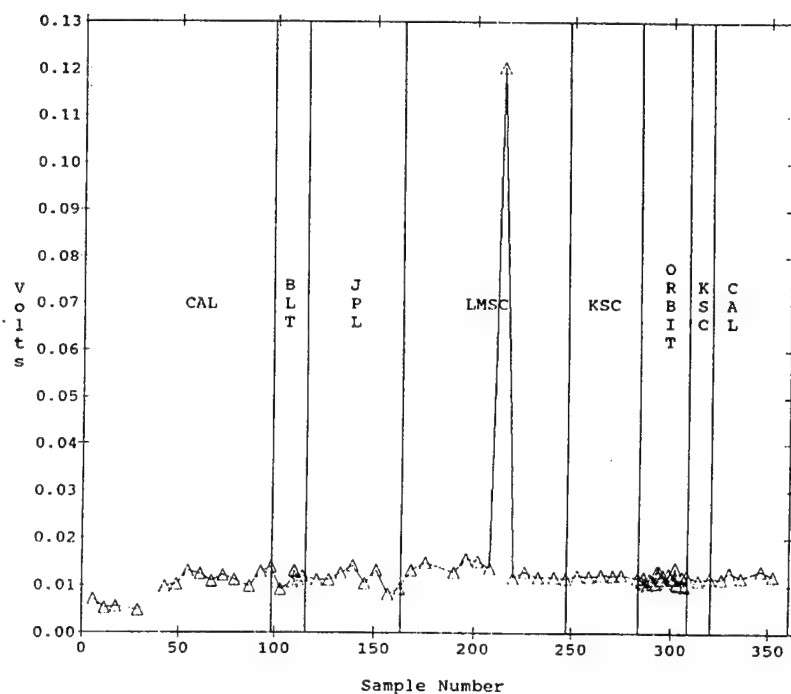
### Chopper On

**RMS noise history for radiometer detector 1-6.**



Gain = HI (x100), Bias = HHHH, FW 4, Sept 1988 - Feb 1992.

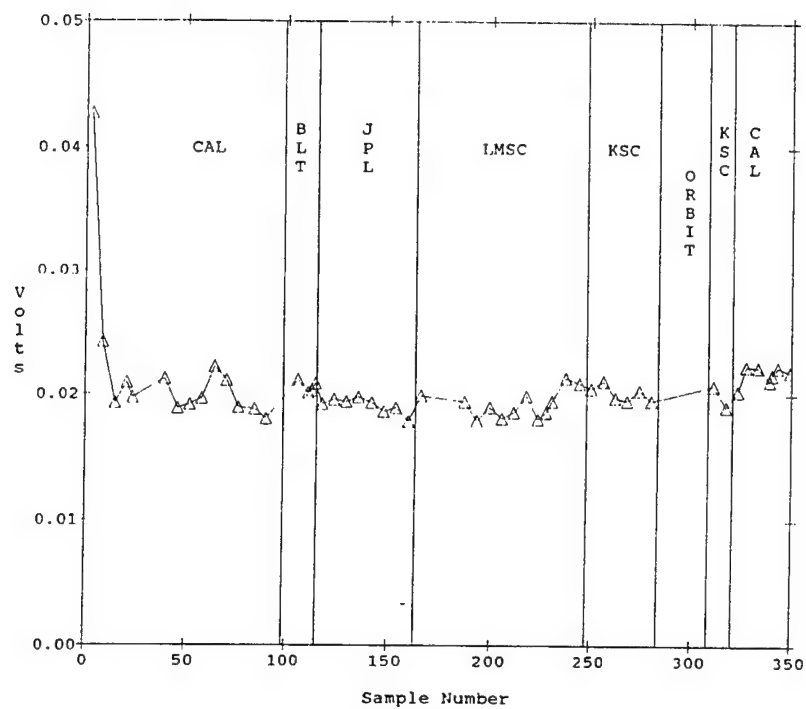
### Chopper Off



Gain = HI (x100), Bias = HHHH, FW 4, Sept 1988 - Feb 1992.

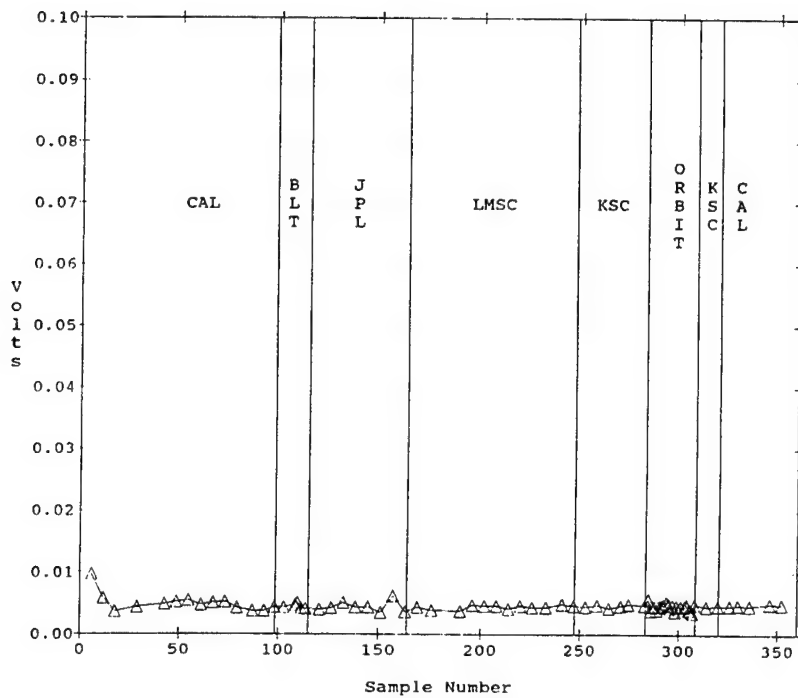
### Chopper On

**RMS noise history for radiometer detector 1-7.**



Gain = HI (x100), Bias = HHHH, FW 4, Sept 1988 - Feb 1992.

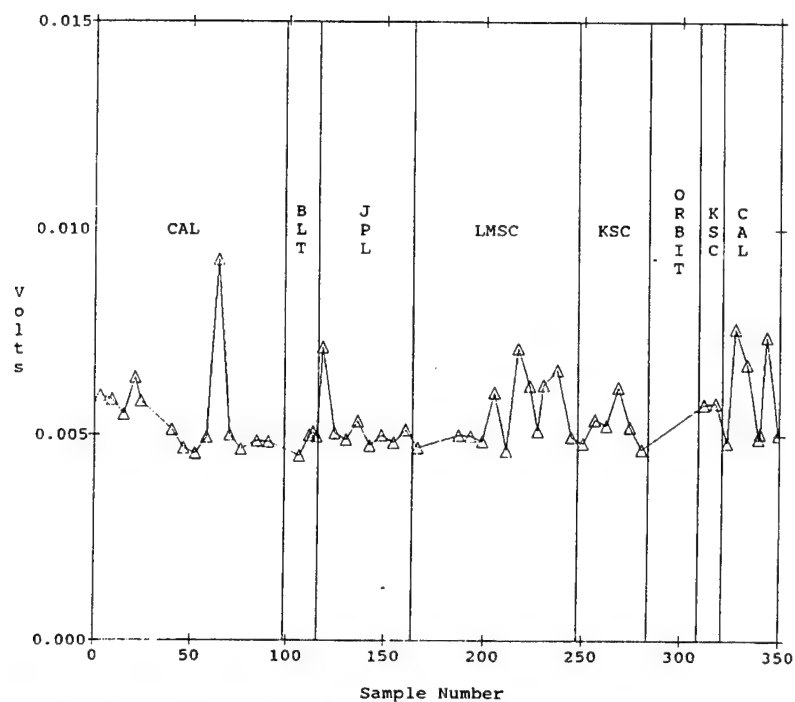
### Chopper Off



Gain = HI (x100), Bias = HHHH, FW 4, Sept 1988 - Feb 1992.

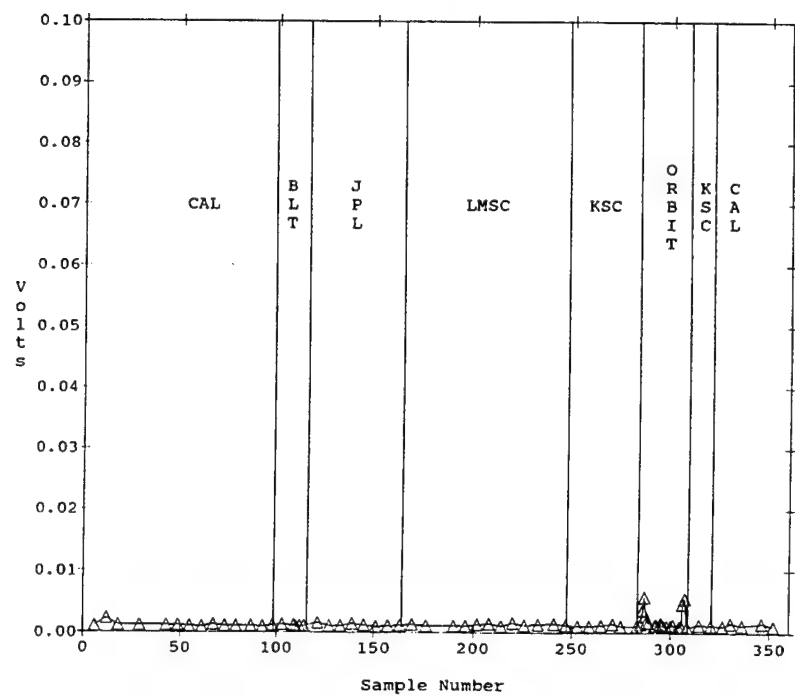
### Chopper On

**RMS noise history for radiometer detector 1-8.**



Gain = HI (x100), Bias = HHHH, FW 4, Sept 1988 - Feb 1992.

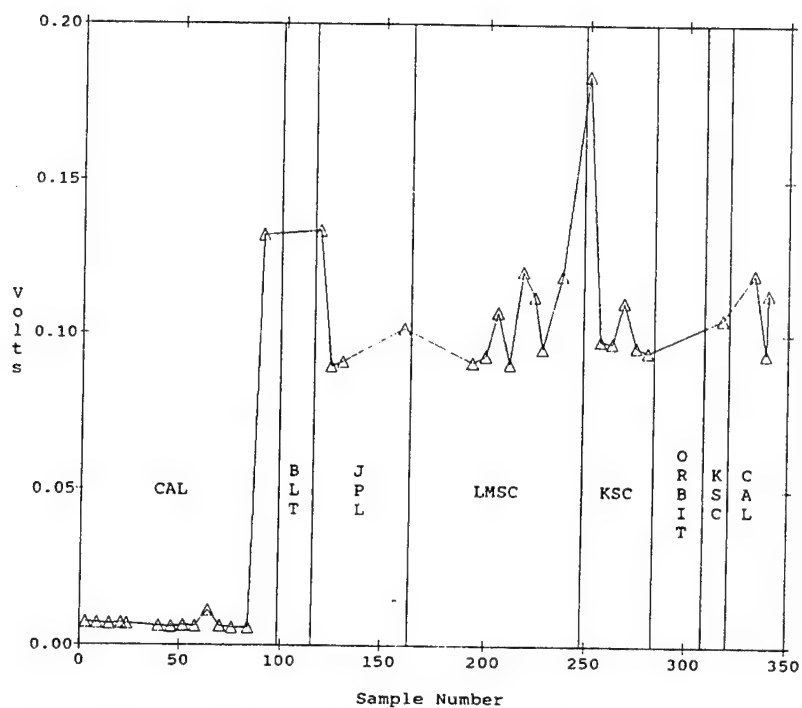
### Chopper Off



Gain = HI (x100), Bias = HHHH, FW 4, Sept 1988 - Feb 1992.

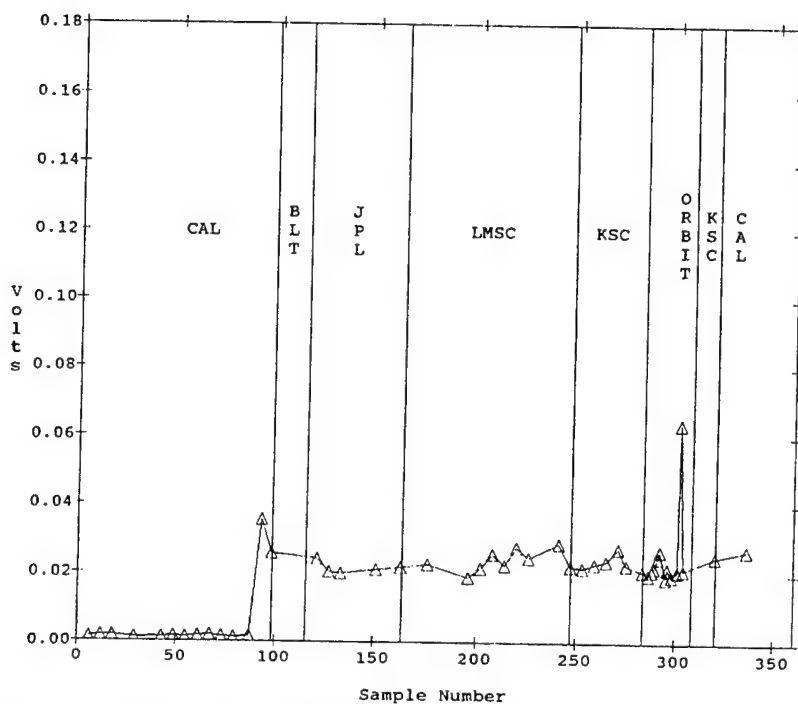
### Chopper On

**RMS noise history for radiometer detector 2-1.**



Gain = HI ( $\times 100$ ), Bias = HHHH, FW 4, Sept 1988 - Feb 1992.

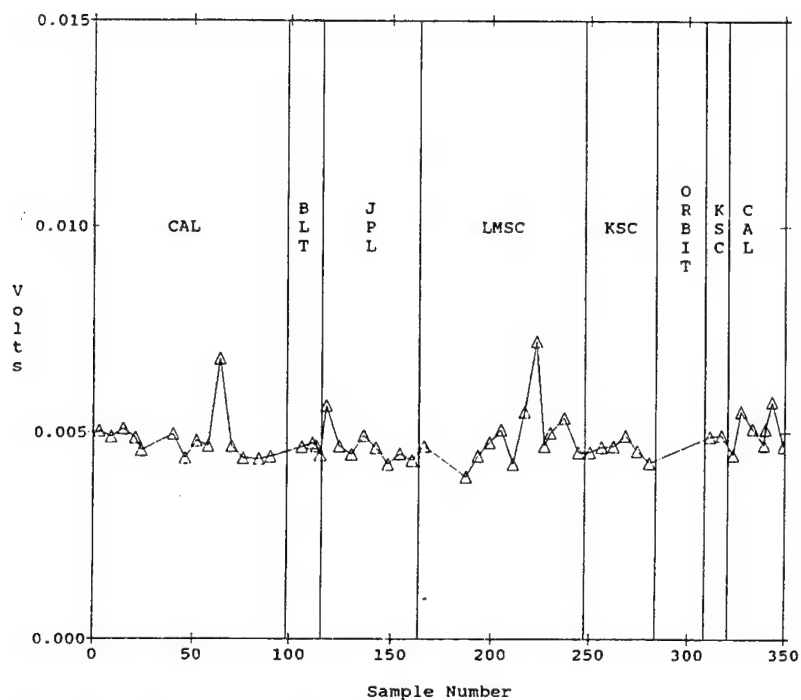
### Chopper Off



Gain = HI ( $\times 100$ ), Bias = HHHH, FW 4, Sept 1988 - Feb 1992.

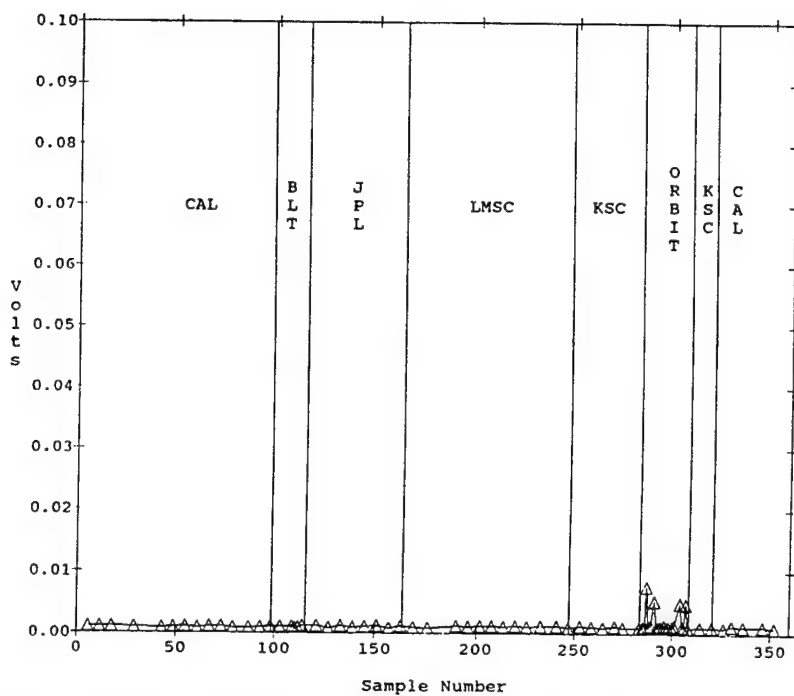
### Chopper On

**RMS noise history for radiometer detector 2-2.**



Gain = HI (x100), Bias = HHHH, FW 4, Sept 1988 - Feb 1992.

### Chopper Off

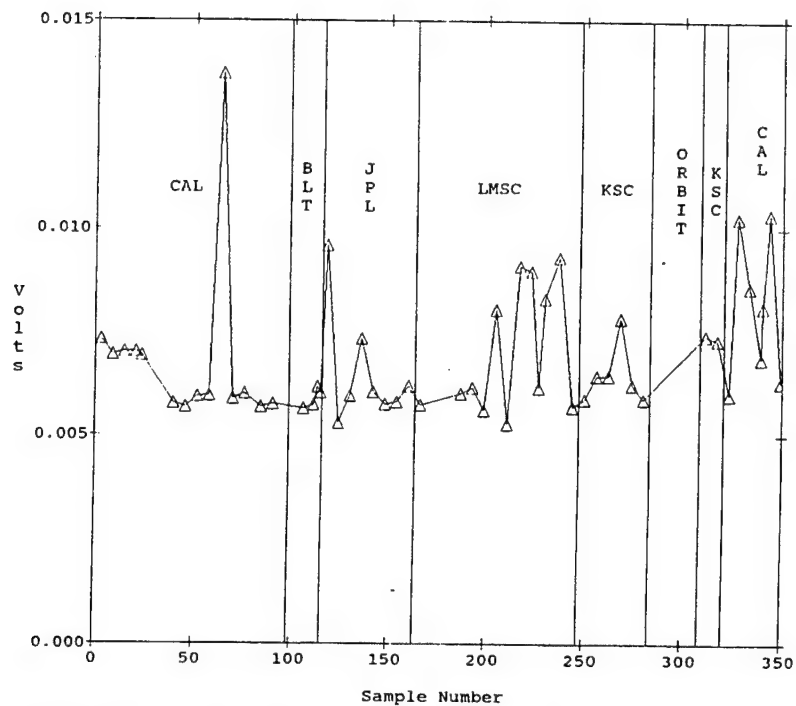


Gain = HI (x100), Bias = HHHH, FW 4, Sept 1988 - Feb 1992.

### Chopper On

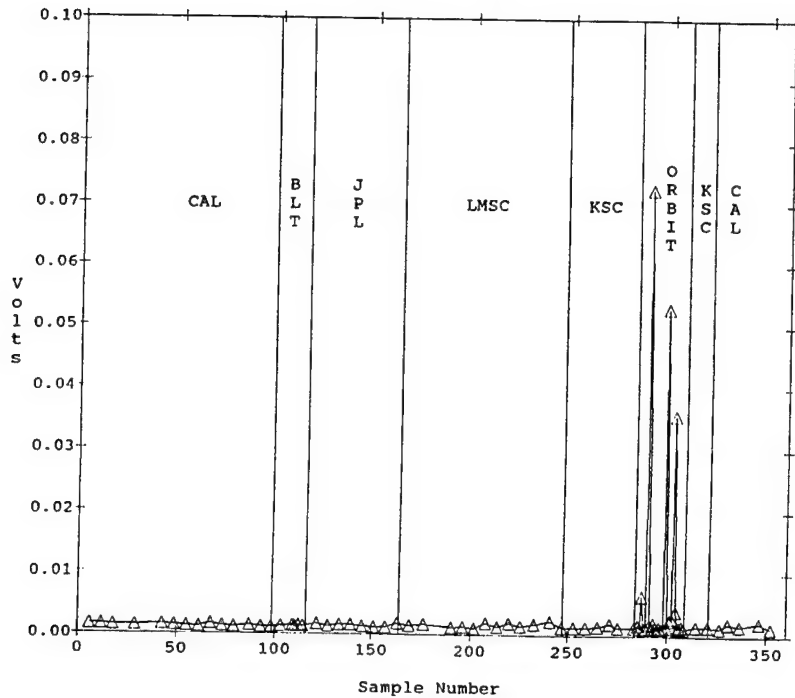
**RMS noise history for radiometer detector 2-3.**





Gain = HI (x100), Bias = HHHH, FW 4, Sept 1988 - Feb 1992.

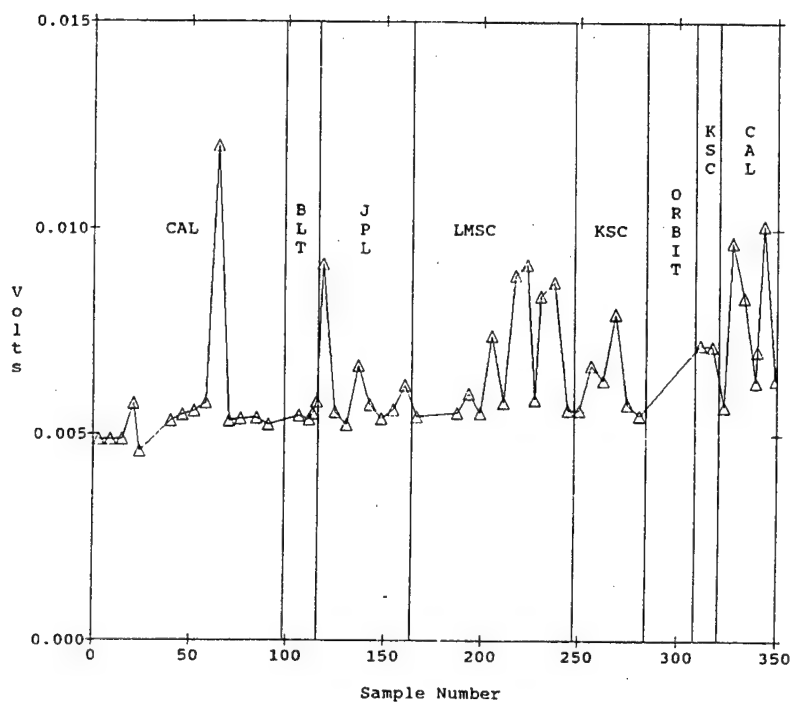
### Chopper Off



Gain = HI (x100), Bias = HHHH, FW 4, Sept 1988 - Feb 1992.

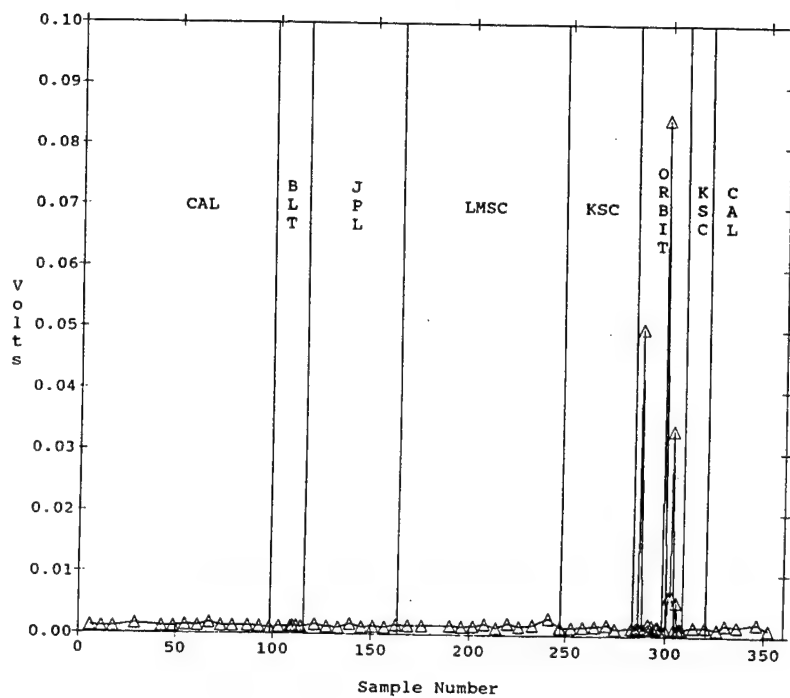
### Chopper On

**RMS noise history for radiometer detector 2-4.**



Gain = HI (x100), Bias = HHHH, FW 4, Sept 1988 - Feb 1992.

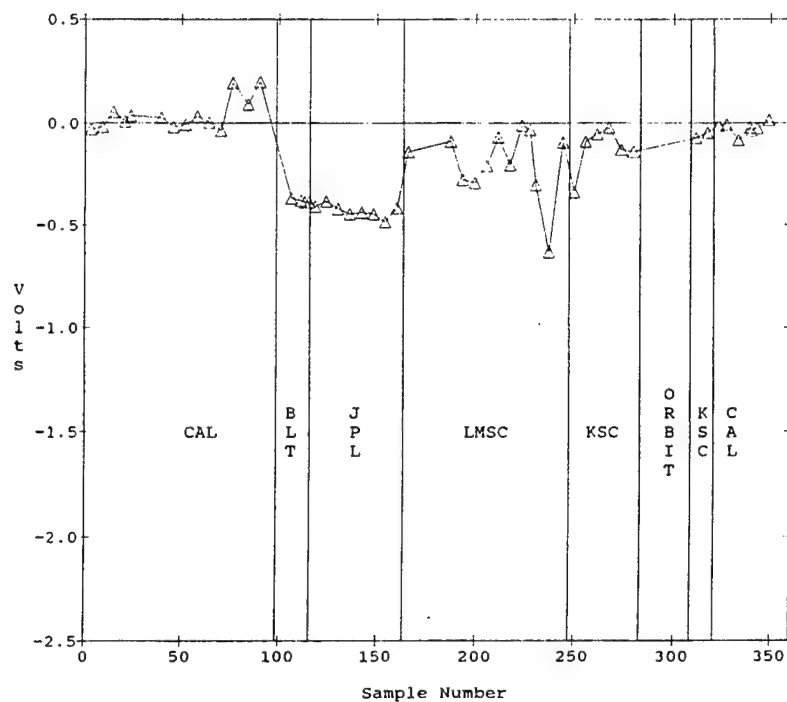
### Chopper Off



Gain = HI (x100), Bias = HHHH, FW 4, Sept 1988 - Feb 1992.

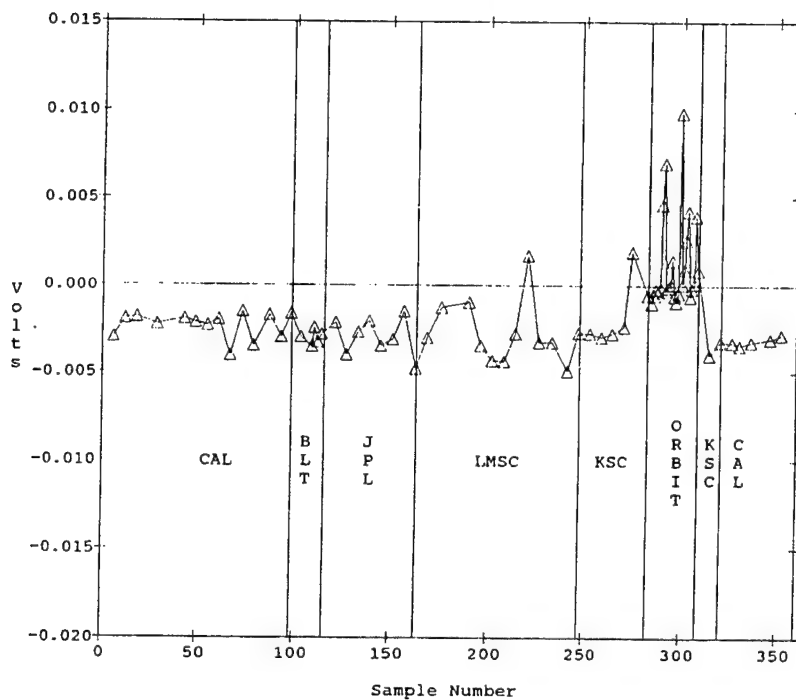
### Chopper On

RMS noise history for radiometer detector 2-5.



Gain = HI (x100), Bias = HHHH, FW 4, Sept 1988 - Feb 1992.

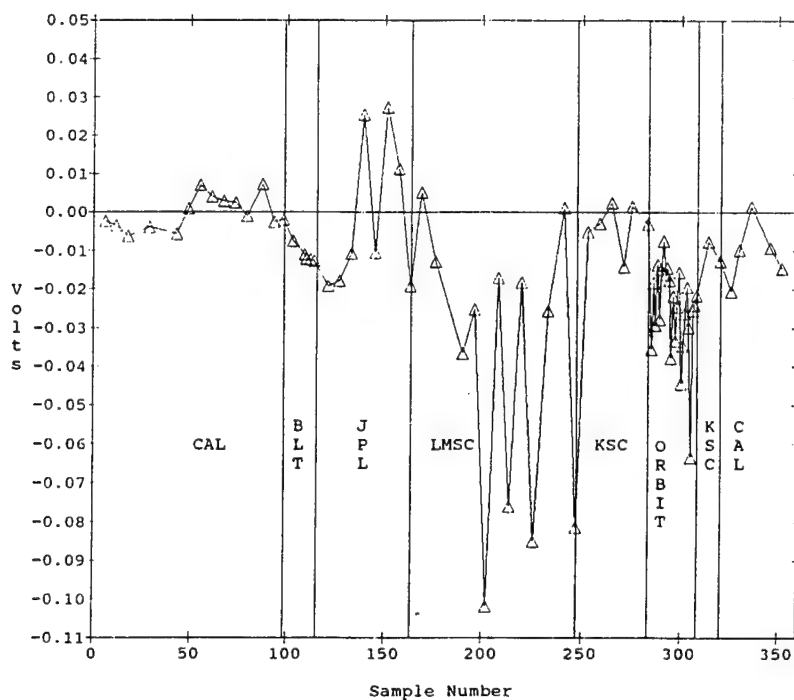
### Chopper Off



Gain = HI (x100), Bias = HHHH, FW 4, Sept 1988 - Feb 1992.

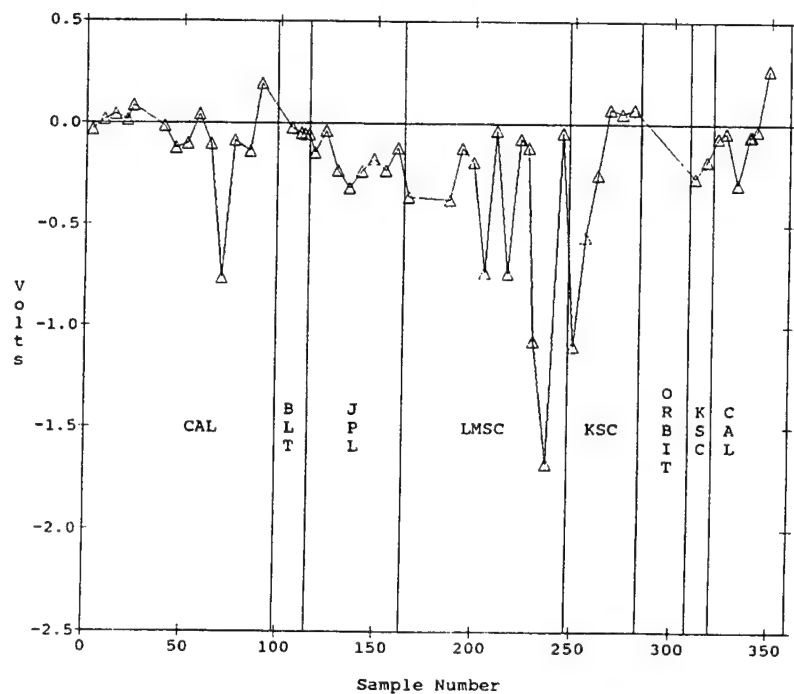
### Chopper On

Offset history for radiometer detector 1-1.



Gain = HI (x100), Bias = HHHH, FW 4, Sept 1988 - Feb 1992.

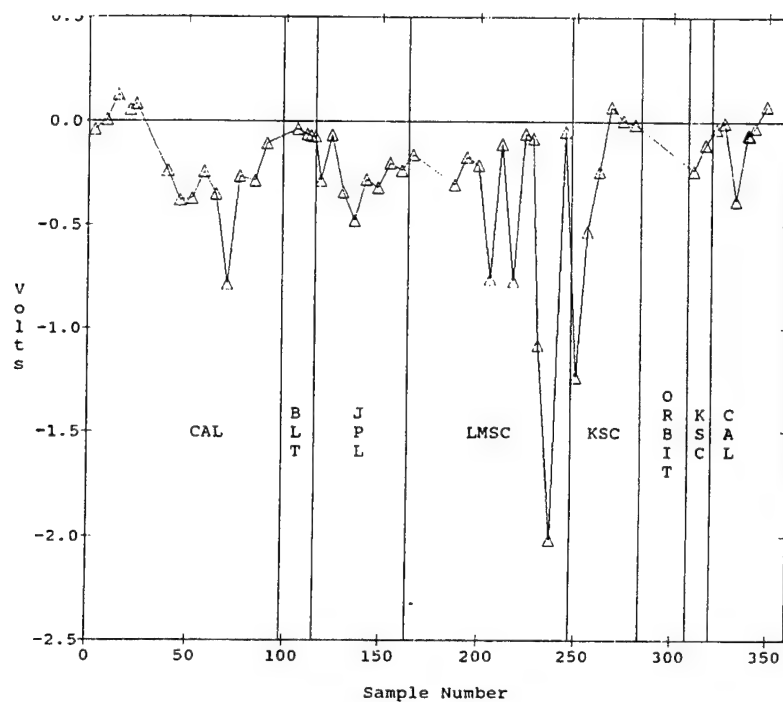
### Chopper Off



Gain = HI (x100), Bias = HHHH, FW 4, Sept 1988 - Feb 1992.

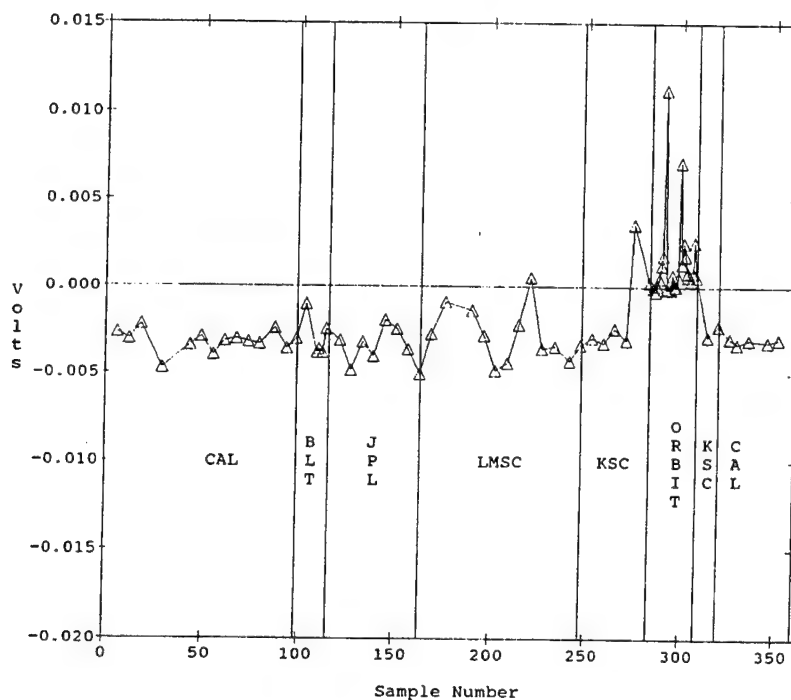
### Chopper On

Offset history for radiometer detector 1-2.



Gain = HI (x100), Bias = HHHH, FW 4, Sept 1988 - Feb 1992.

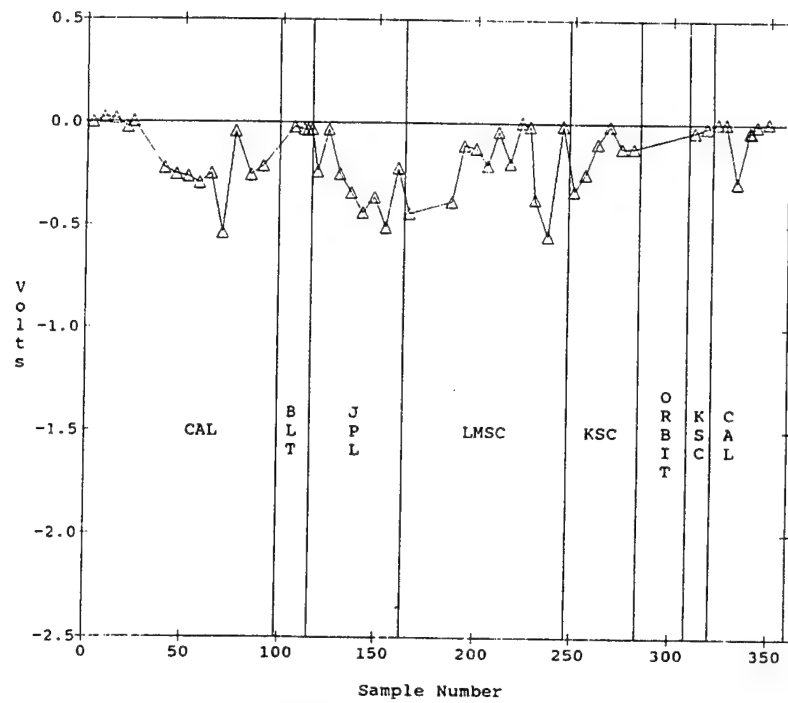
### Chopper Off



Gain = HI (x100), Bias = HHHH, FW 4, Sept 1988 - Feb 1992.

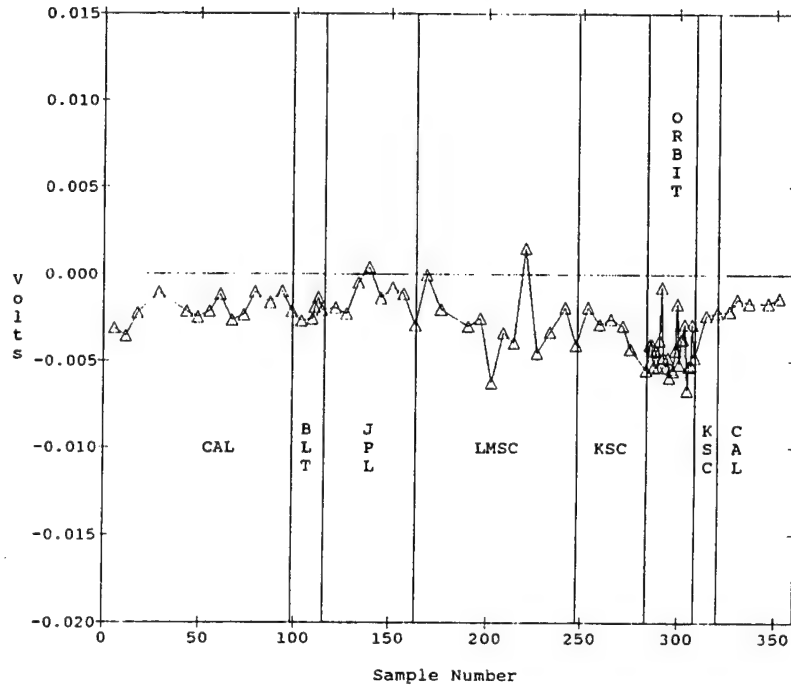
### Chopper On

Offset history for radiometer detector 1-3.



Gain = HI (x100), Bias = HHHH, FW 4, Sept 1988 - Feb 1992.

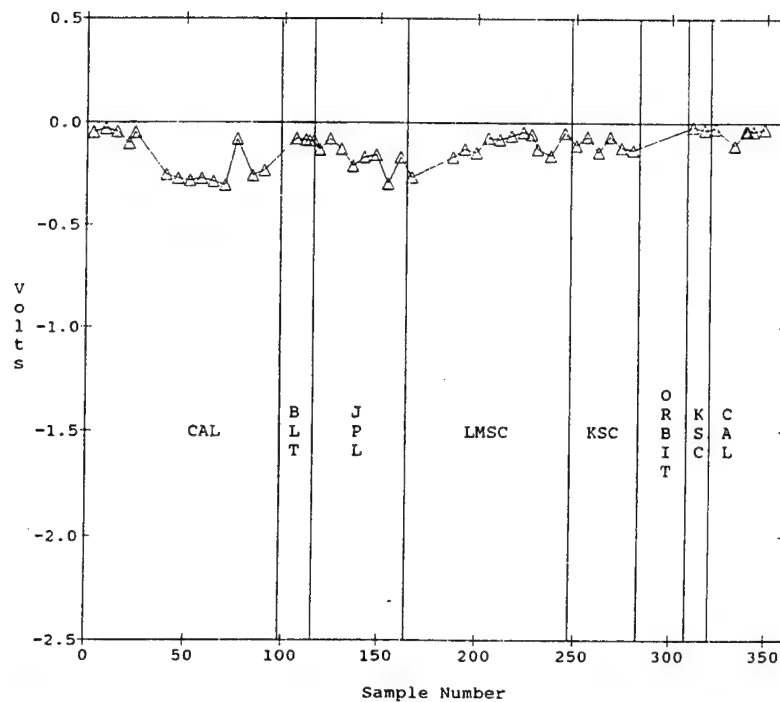
### Chopper Off



Gain = HI (x100), Bias = HHHH, FW 4, Sept 1988 - Feb 1992.

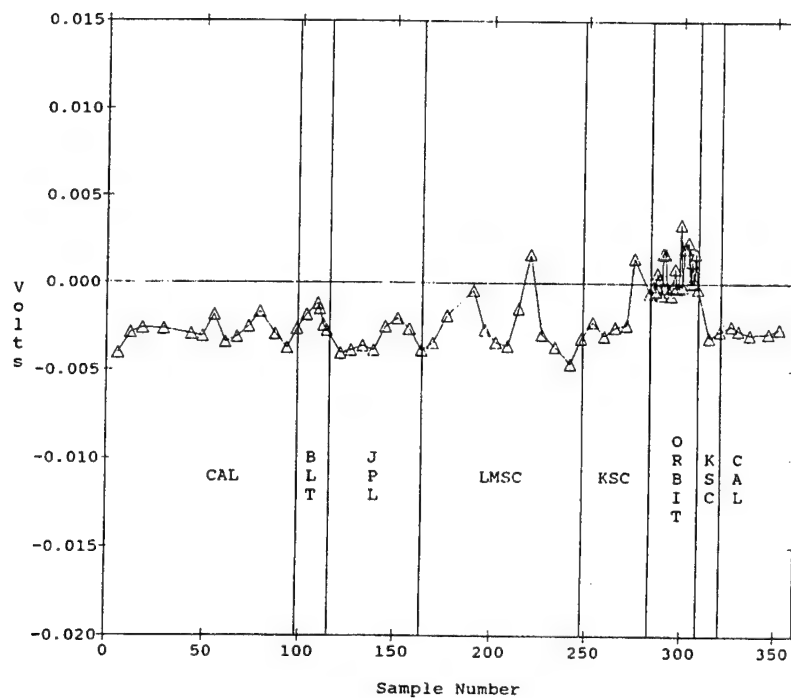
### Chopper On

Offset history for radiometer detector 1-4.



Gain = HI (x100), Bias = HHHH, FW 4, Sept 1988 - Feb 1992.

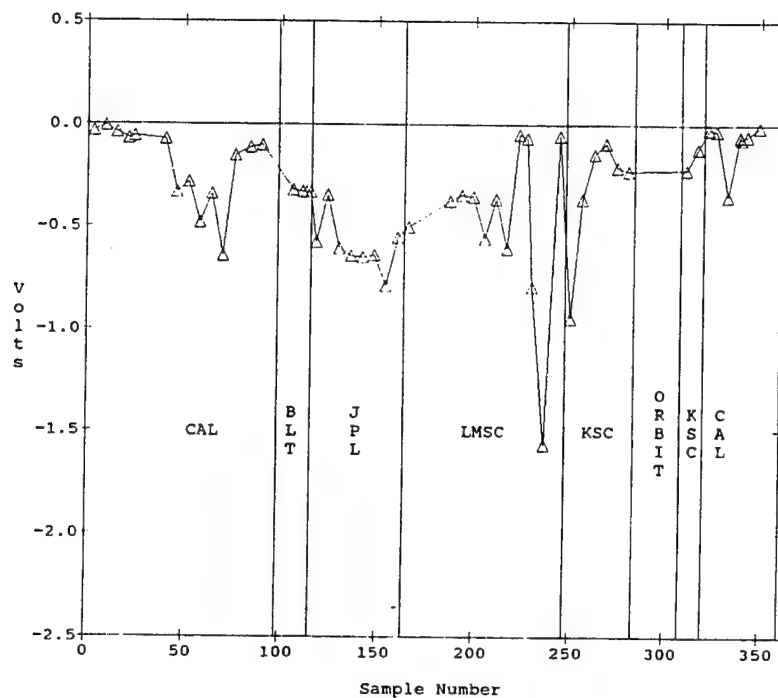
### Chopper Off



Gain = HI (x100), Bias = HHHH, FW 4, Sept 1988 - Feb 1992.

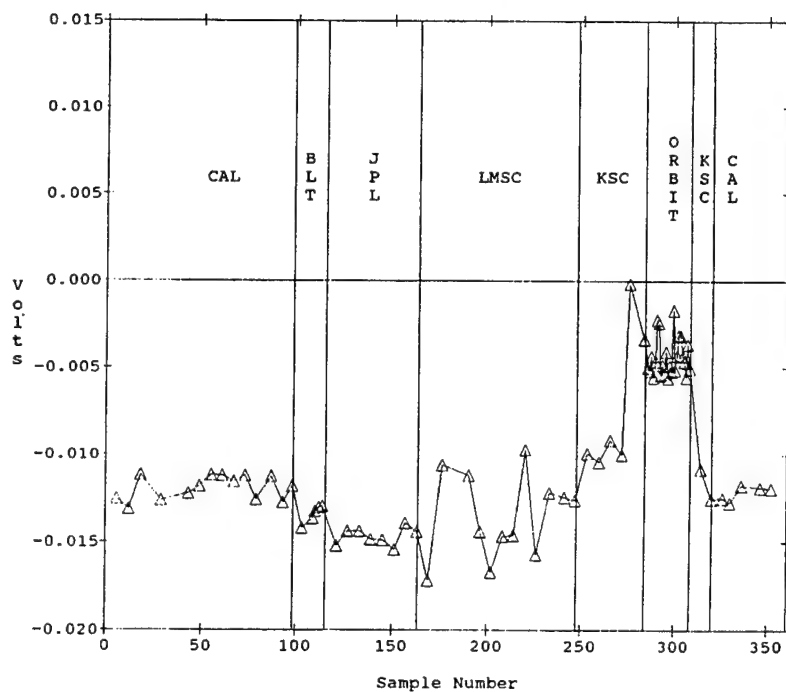
### Chopper On

Offset history for radiometer detector 1-5.



Gain = HI (x100), Bias = HHHH, FW 4, Sept 1988 - Feb 1992.

### Chopper Off

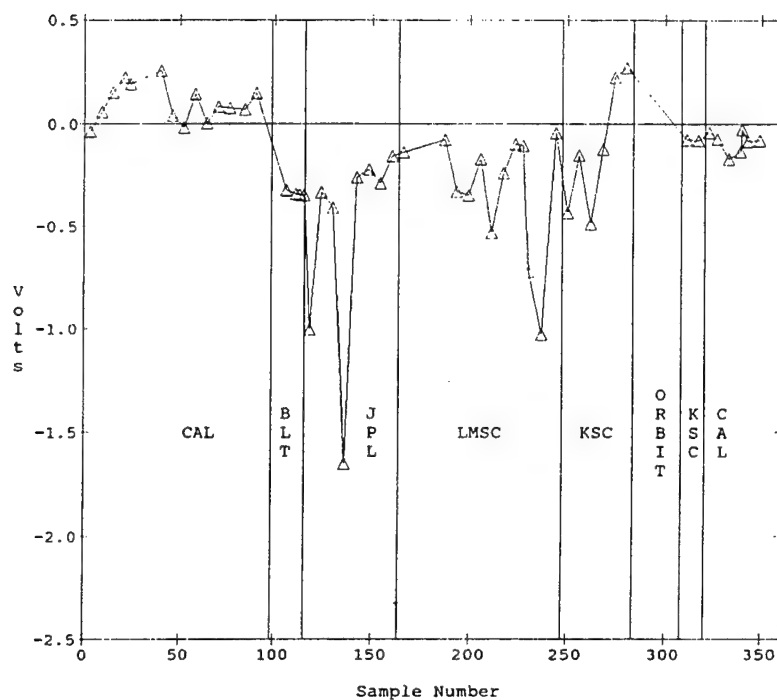


Gain = HI (x100), Bias = HHHH, FW 4, Sept 1988 - Feb 1992.

### Chopper On

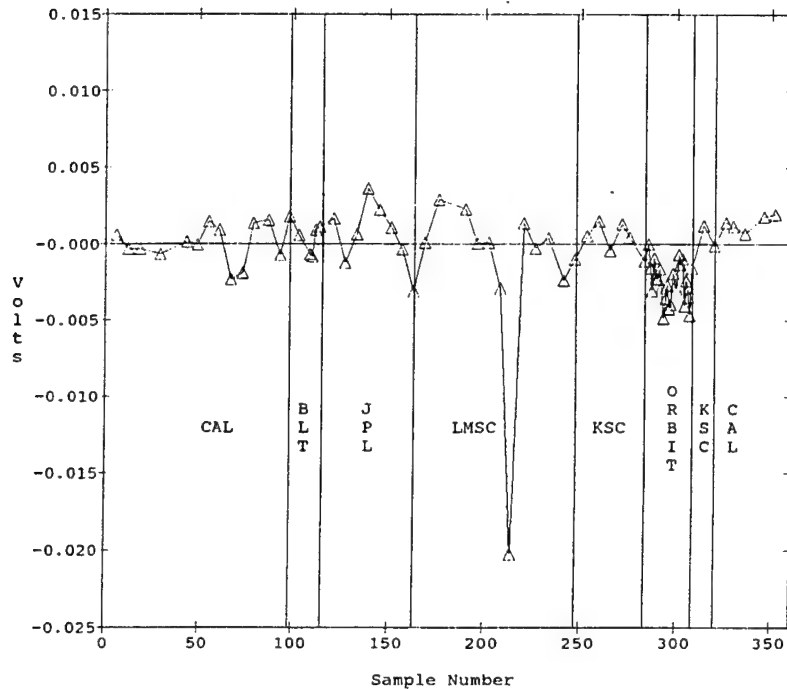
Offset history for radiometer detector 1-6.





Gain = HI (x100), Bias = HHHH, FW 4, Sept 1988 - Feb 1992.

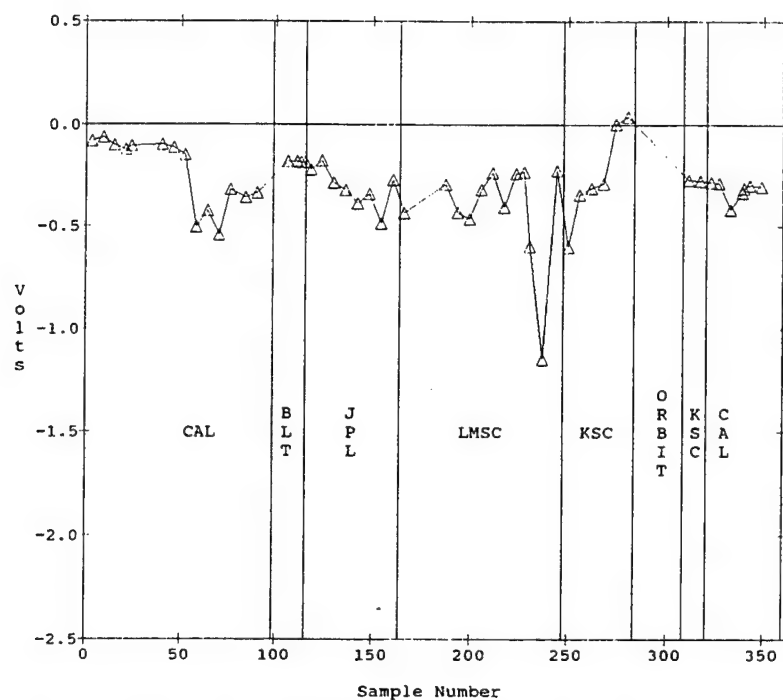
### Chopper Off



Gain = HI (x100), Bias = HHHH, FW 4, Sept 1988 - Feb 1992.

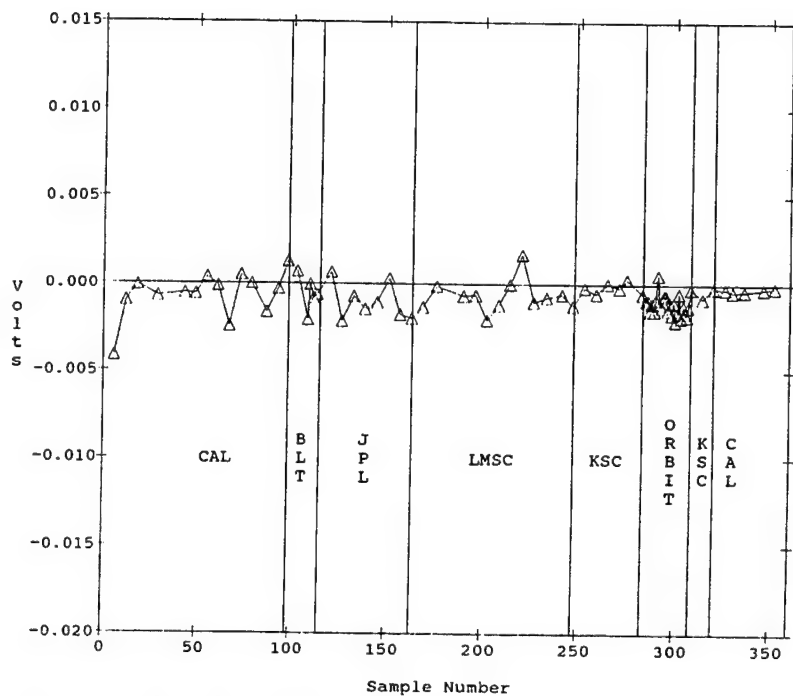
### Chopper On

Offset history for radiometer detector 1-7.



Gain = HI (x100), Bias = HHHH, FW 4, Sept 1988 - Feb 1992.

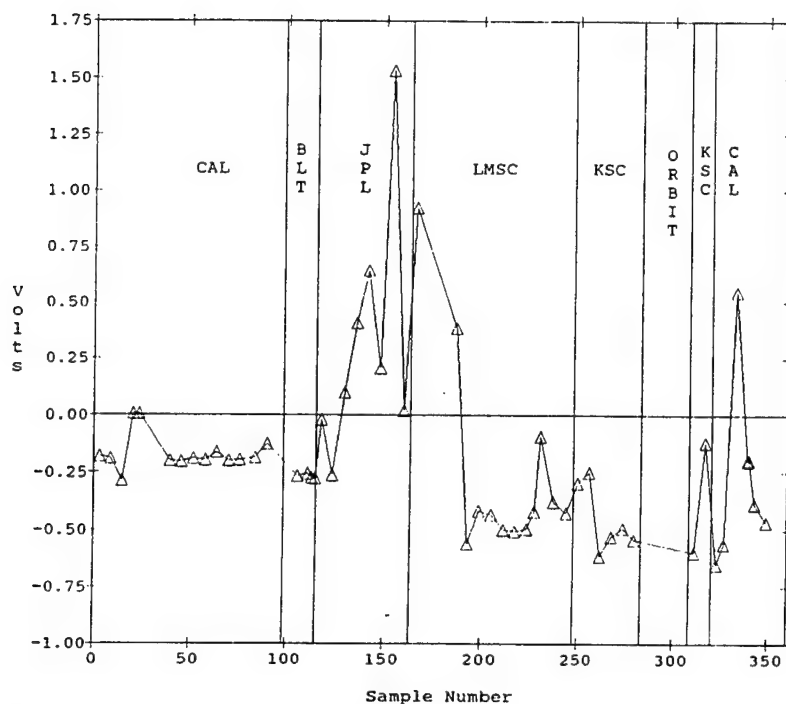
### Chopper Off



Gain = HI (x100), Bias = HHHH, FW 4, Sept 1988 - Feb 1992.

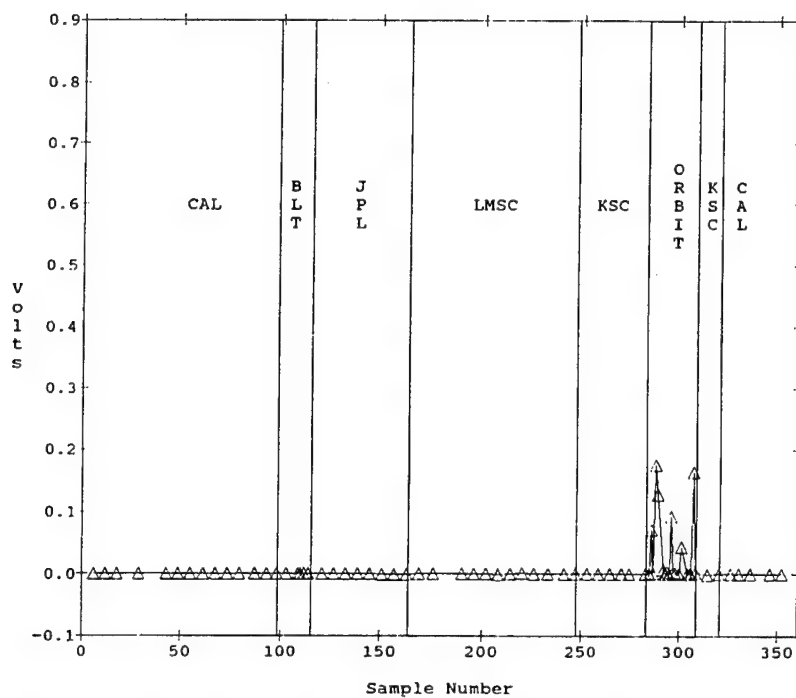
### Chopper On

Offset history for radiometer detector 1-8.



Gain = HI (x100), Bias = HHHH, FW 4, Sept 1988 - Feb 1992.

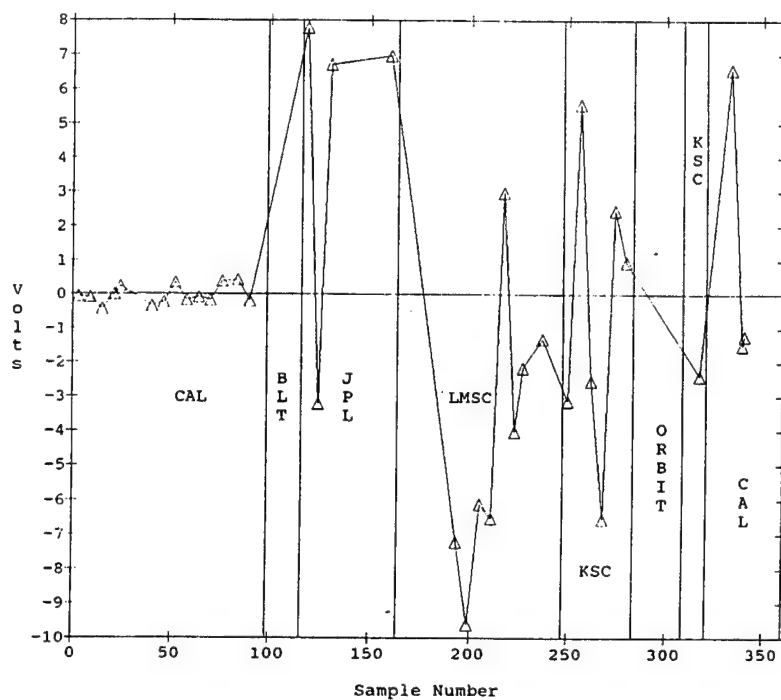
### Chopper Off



Gain = HI (x100), Bias = HHHH, FW 4, Sept 1988 - Feb 1992.

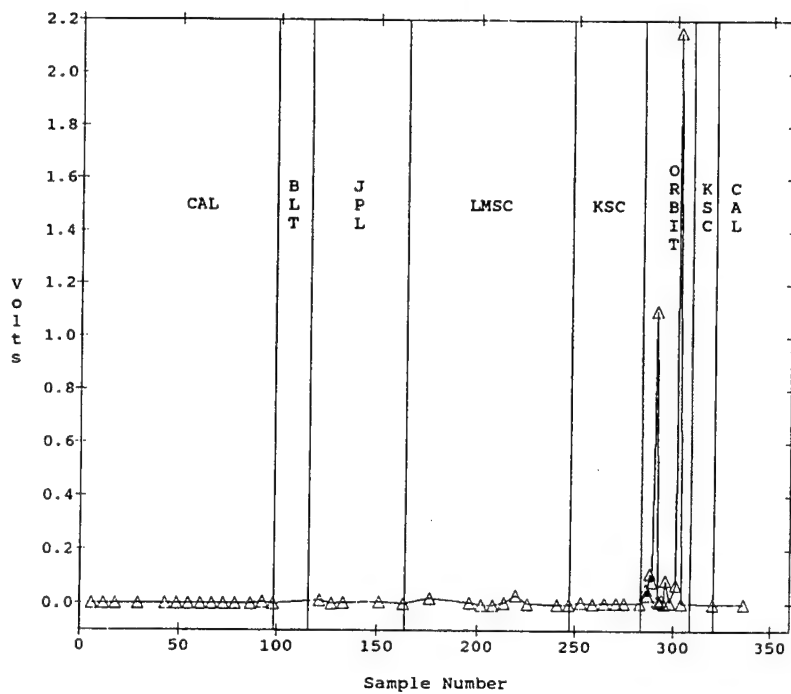
### Chopper On

Offset history for radiometer detector 2-1.



Gain = HI (x100), Bias = HHHH, FW 4, Sept 1988 - Feb 1992.

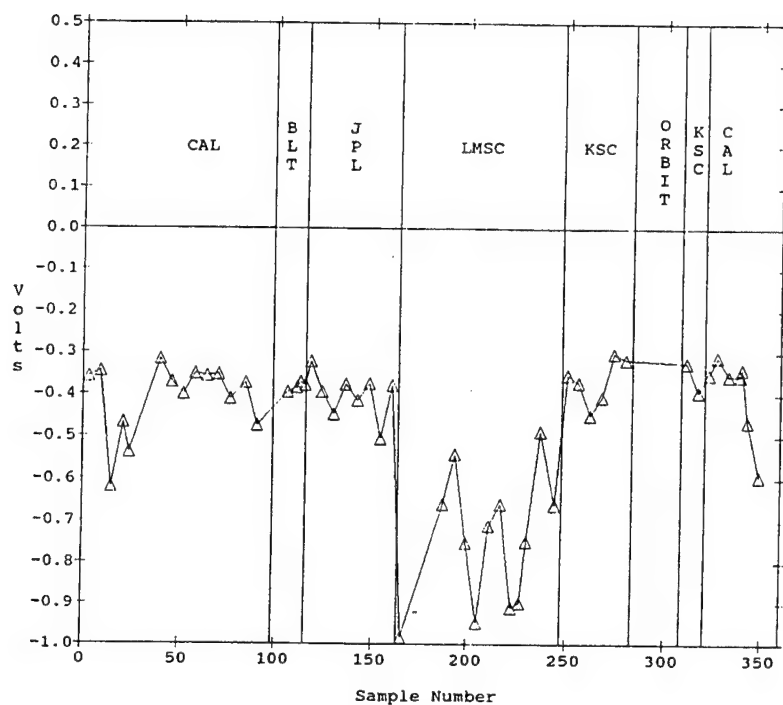
### Chopper Off



Gain = HI (x100), Bias = HHHH, FW 4, Sept 1988 - Feb 1992.

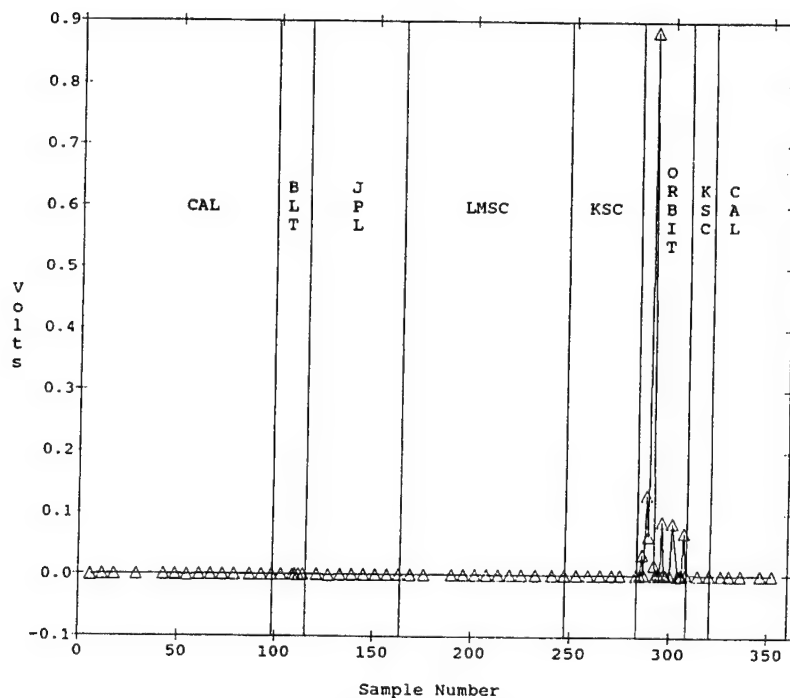
### Chopper On

Offset history for radiometer detector 2-2.



Gain = HI (x100), Bias = HHHH, FW 4, Sept 1988 - Feb 1992.

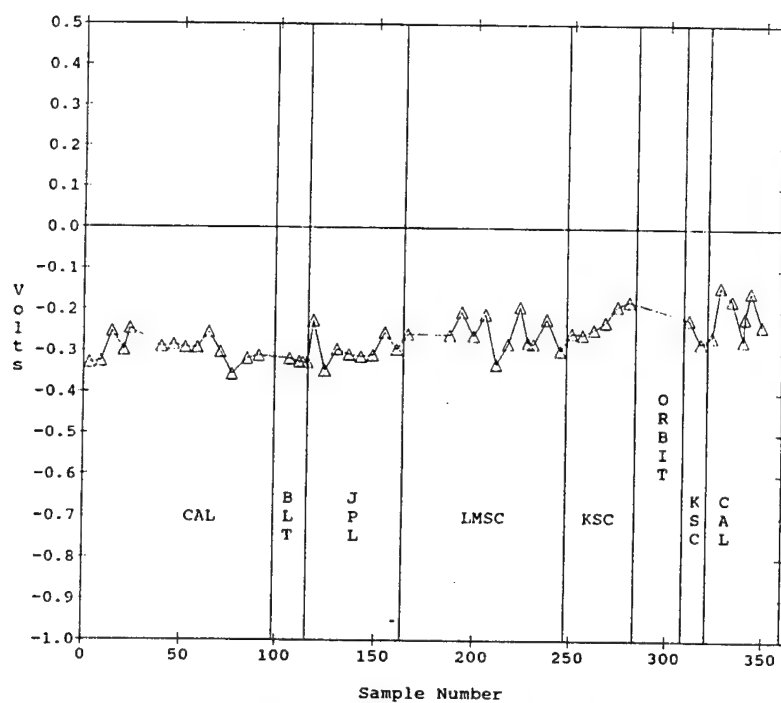
### Chopper Off



Gain = HI (x100), Bias = HHHH, FW 4, Sept 1988 - Feb 1992.

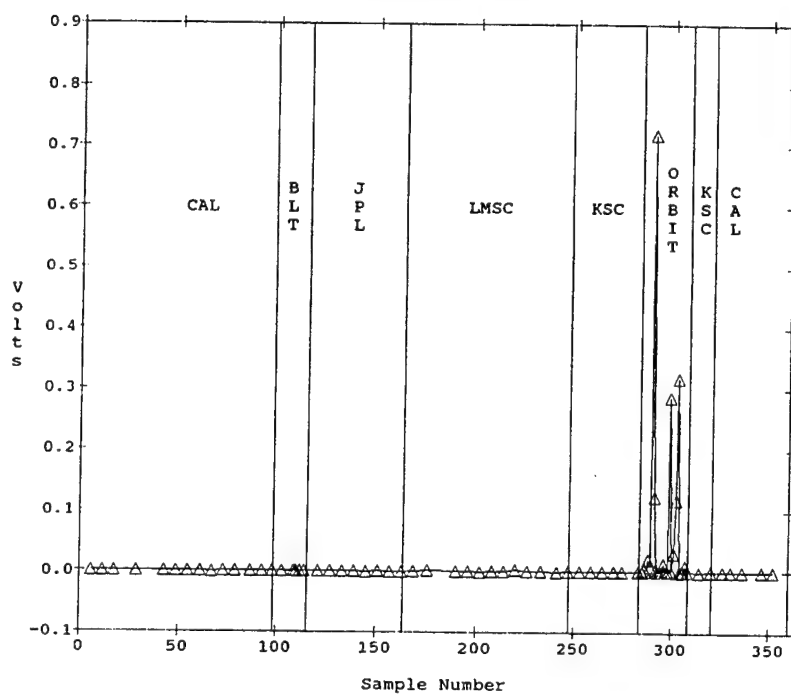
### Chopper On

Offset history for radiometer detector 2-3.



Gain = HI (x100), Bias = HHHH, FW 4, Sept 1988 - Feb 1992.

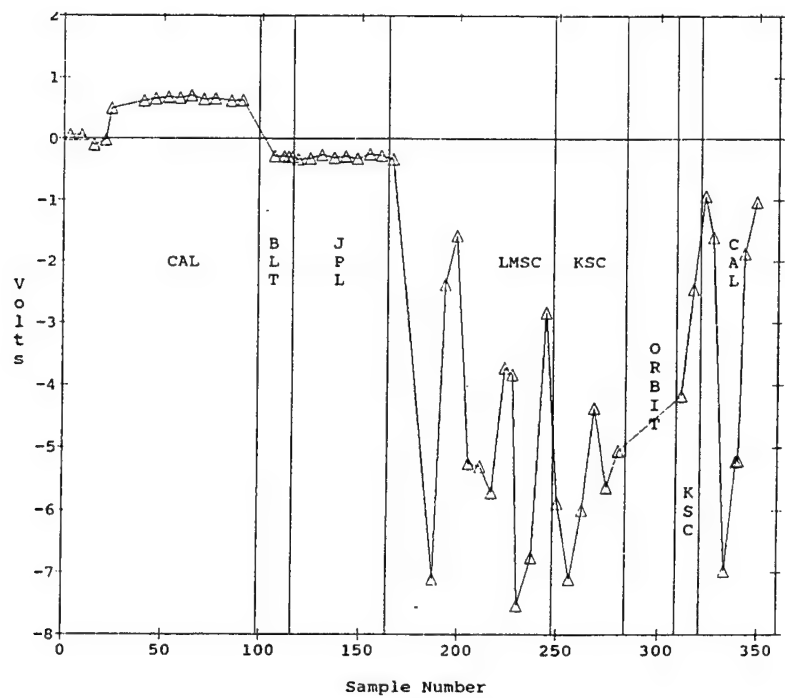
### Chopper Off



Gain = HI (x100), Bias = HHHH, FW 4, Sept 1988 - Feb 1992.

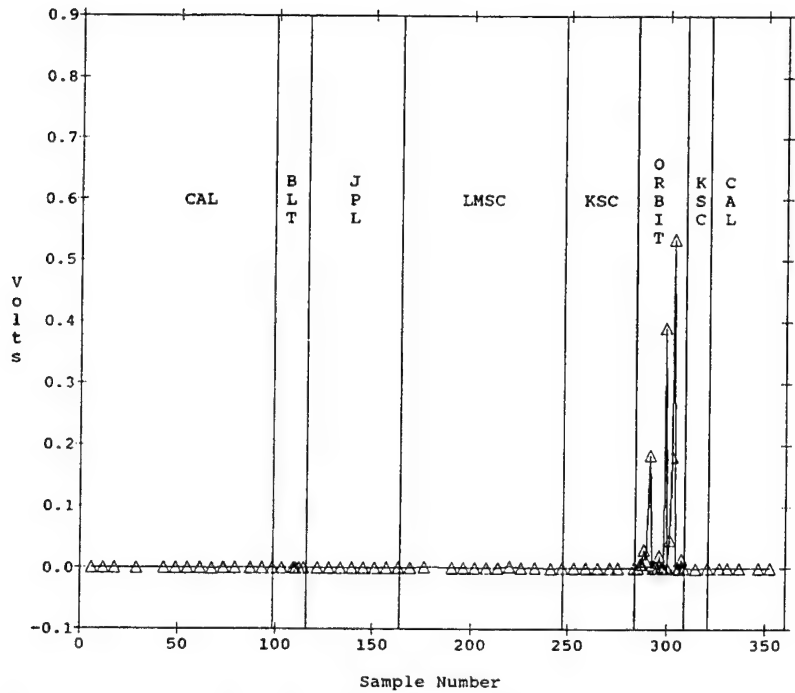
### Chopper On

Offset history for radiometer detector 2-4.



Gain = HI (x100), Bias = HHHH, FW 4, Sept 1988 - Feb 1992.

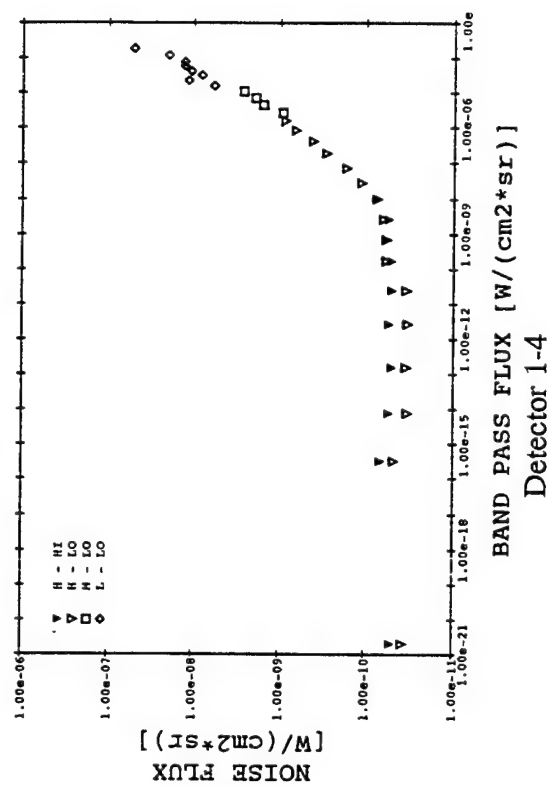
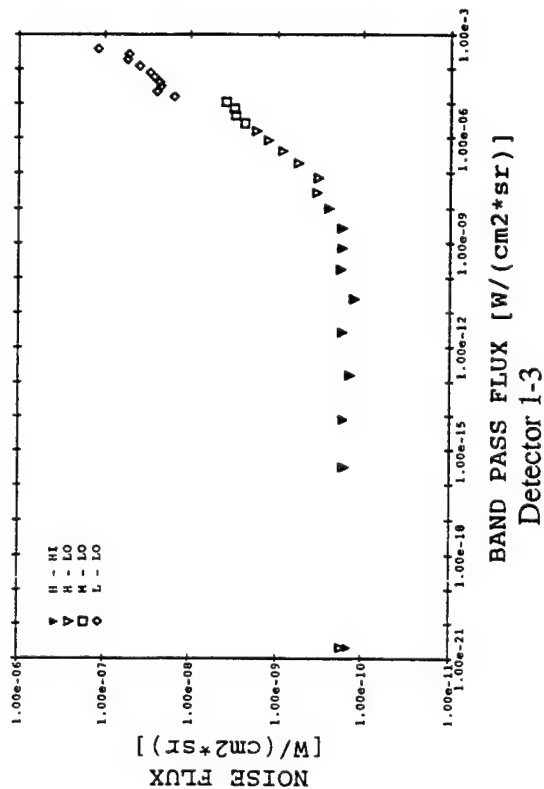
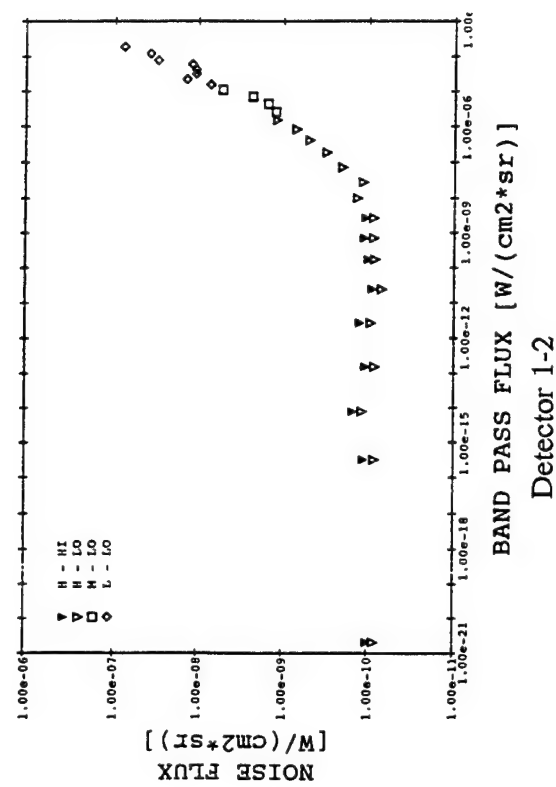
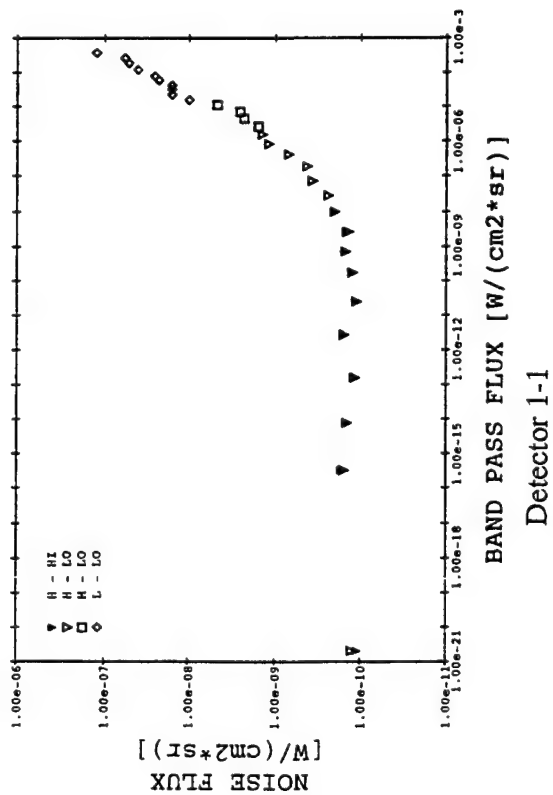
### Chopper Off



Gain = HI (x100), Bias = HHHH, FW 4, Sept 1988 - Feb 1992.

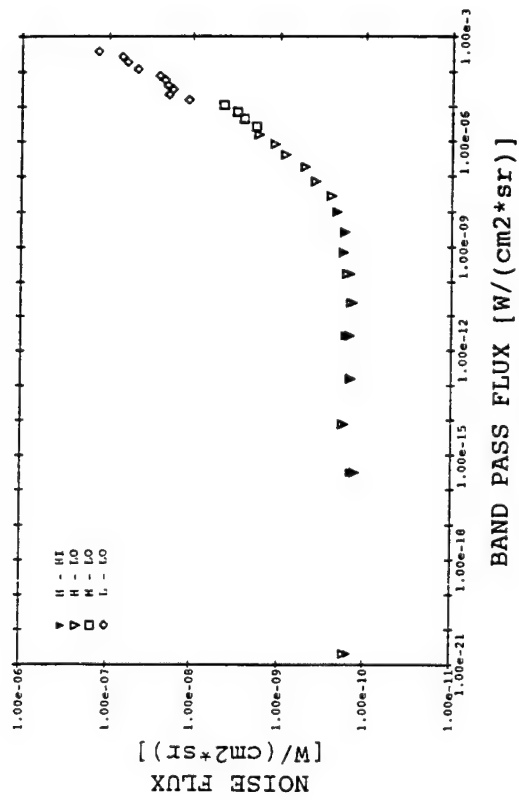
### Chopper On

Offset history for radiometer detector 2-5.

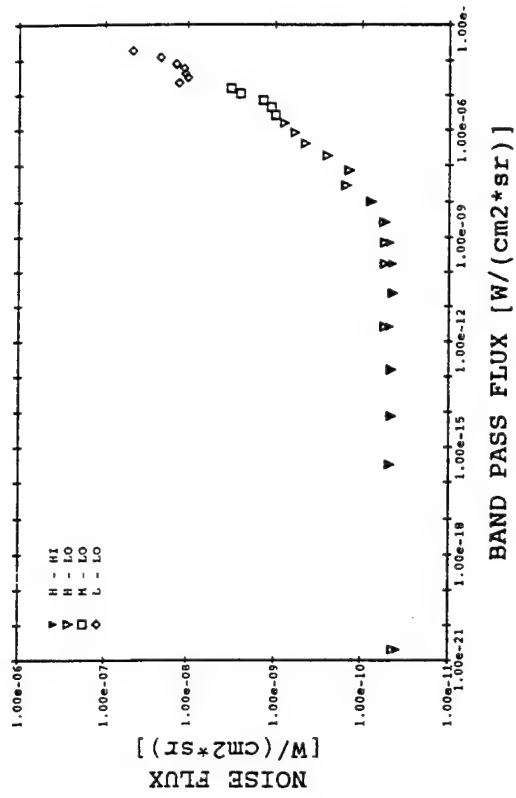


**Radiometer noise flux versus band pass for filter 0**  
 (chopper on, extended area source - order on curve labels is bias - gain).

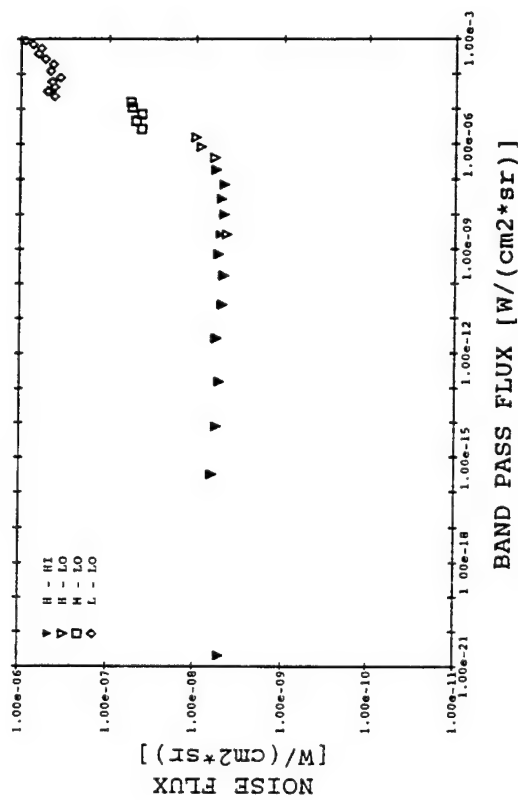




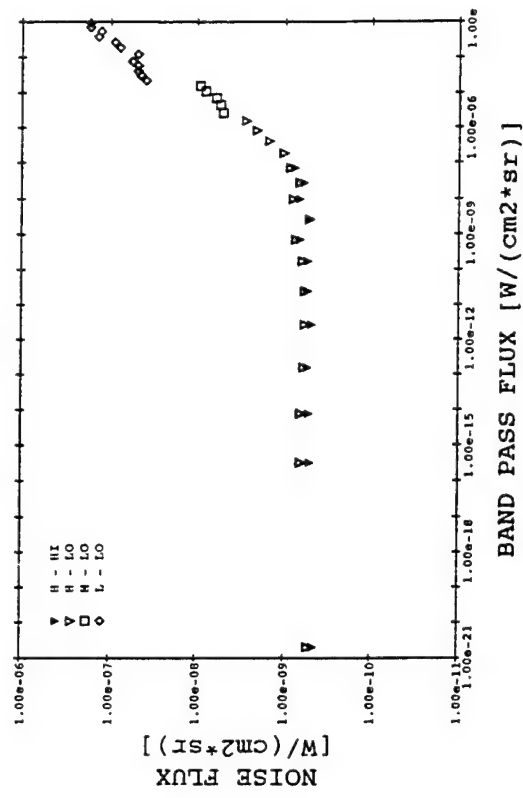
Detector 1-5



Detector 1-6

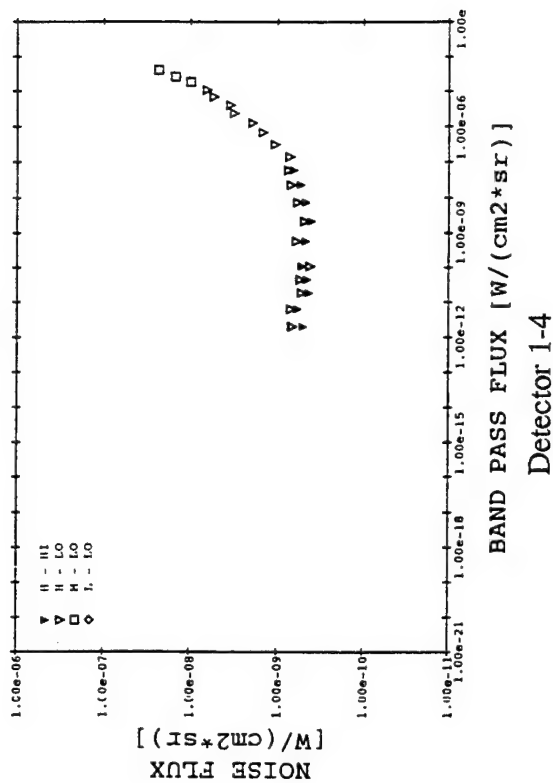
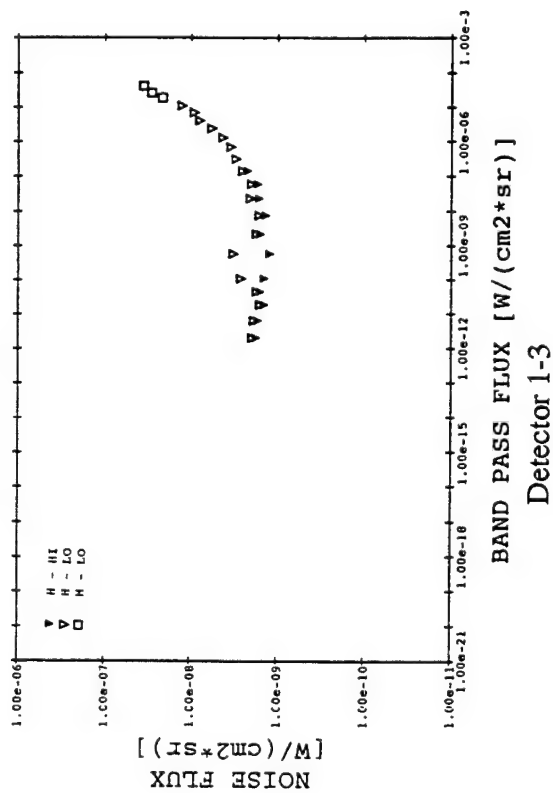
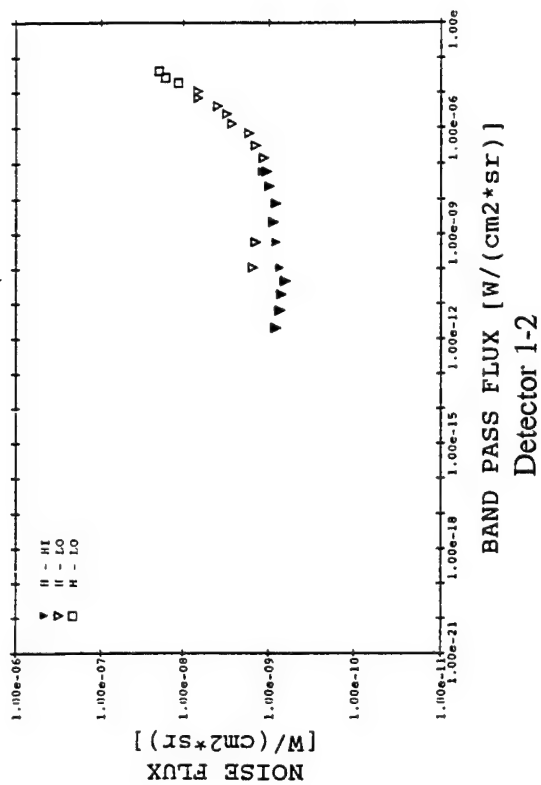
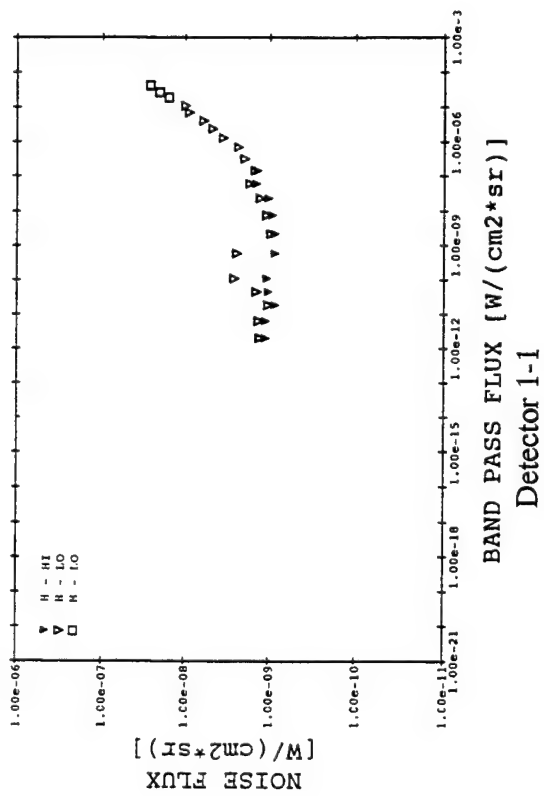


Detector 1-7

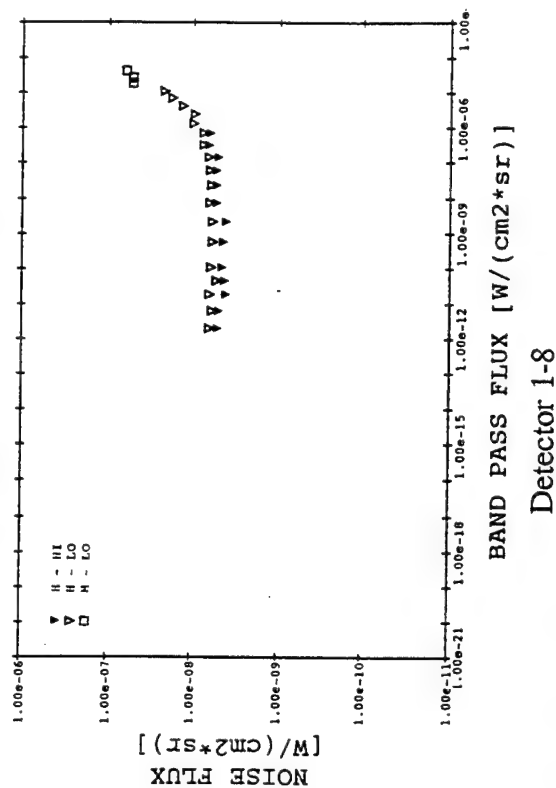
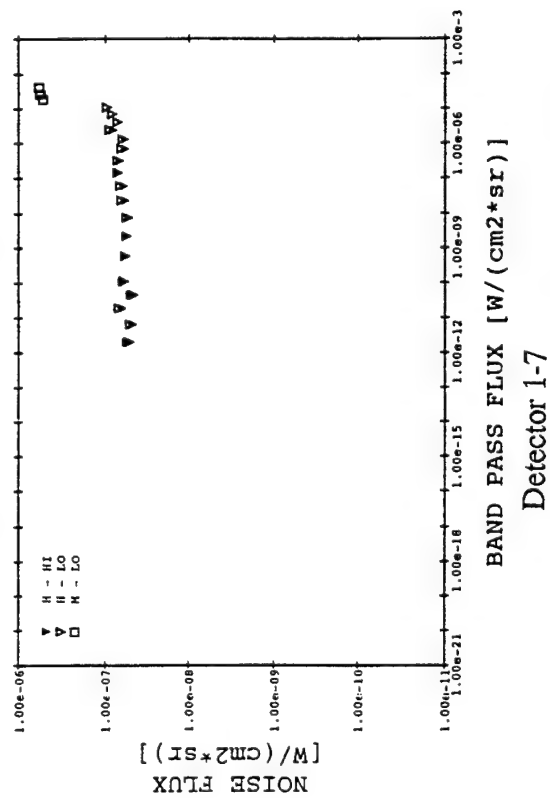
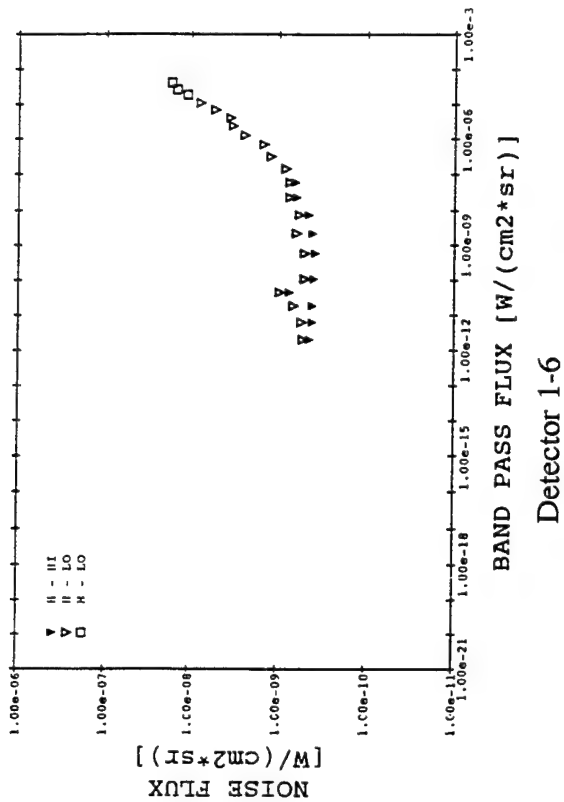
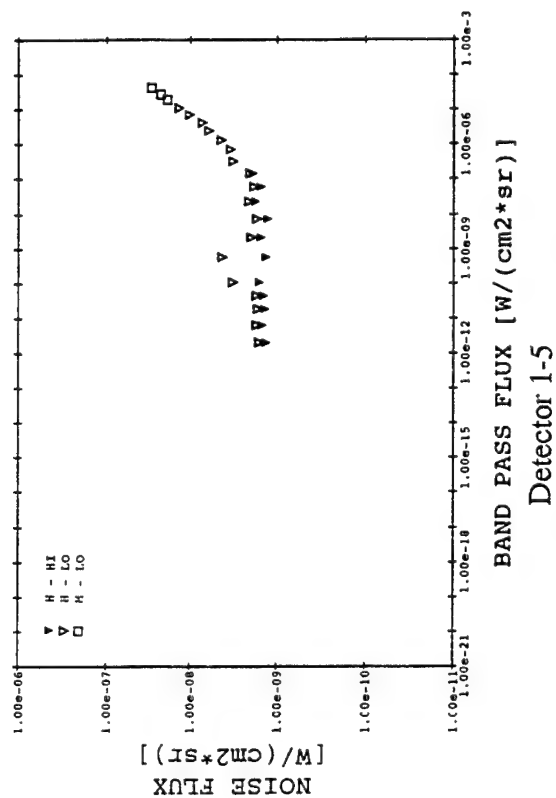


Detector 1-8

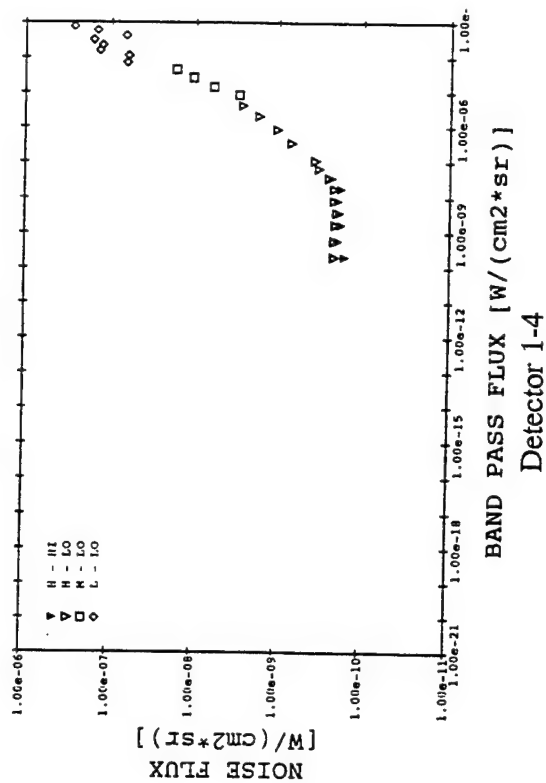
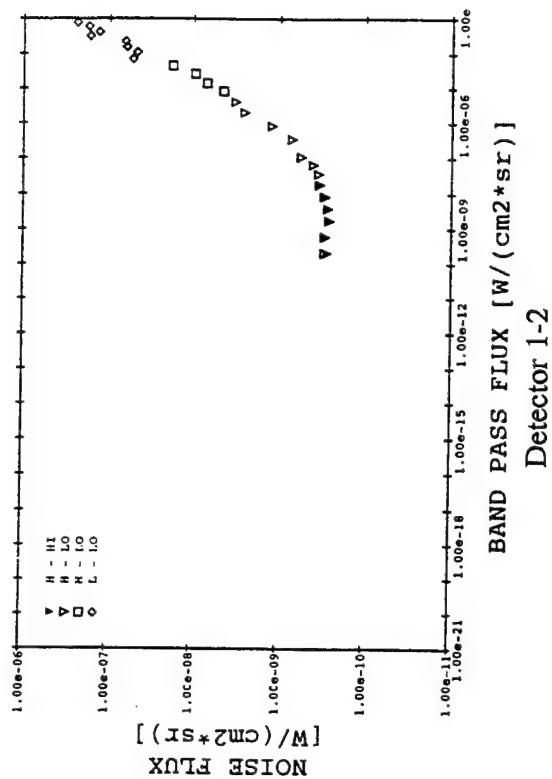
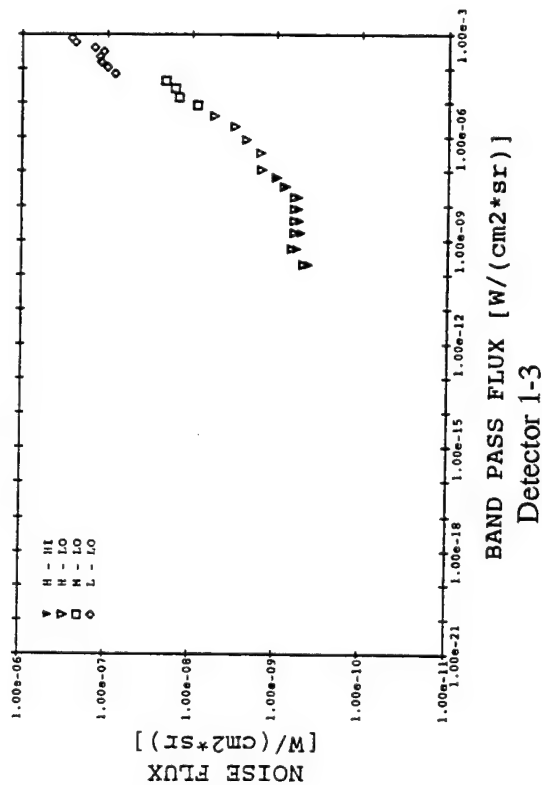
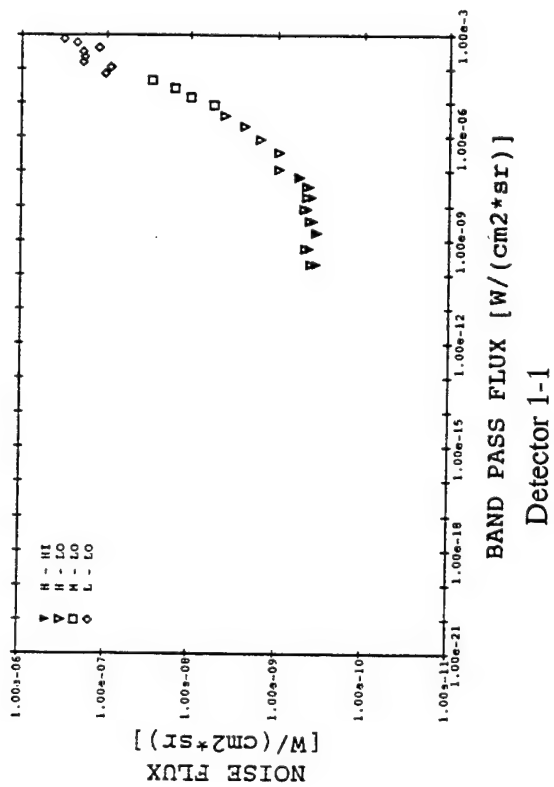
Radiometer noise flux versus band pass for filter 0  
(chopper on, extended area source - order on curve labels is bias - gain).



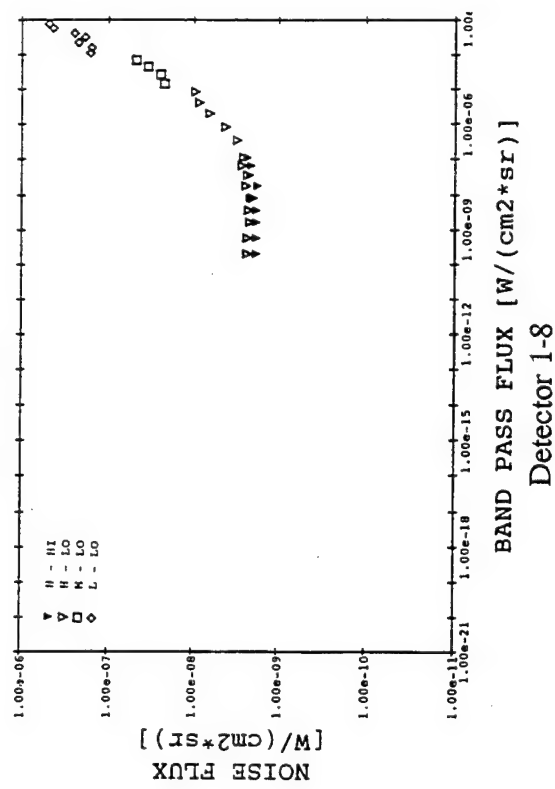
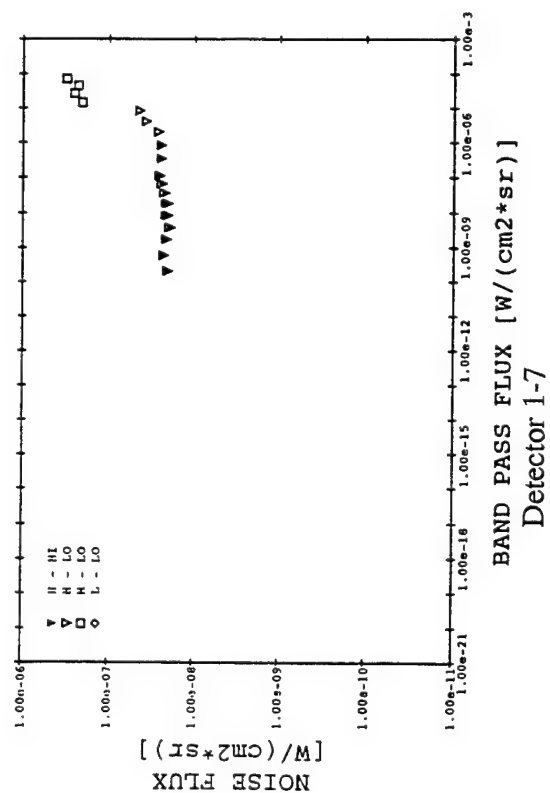
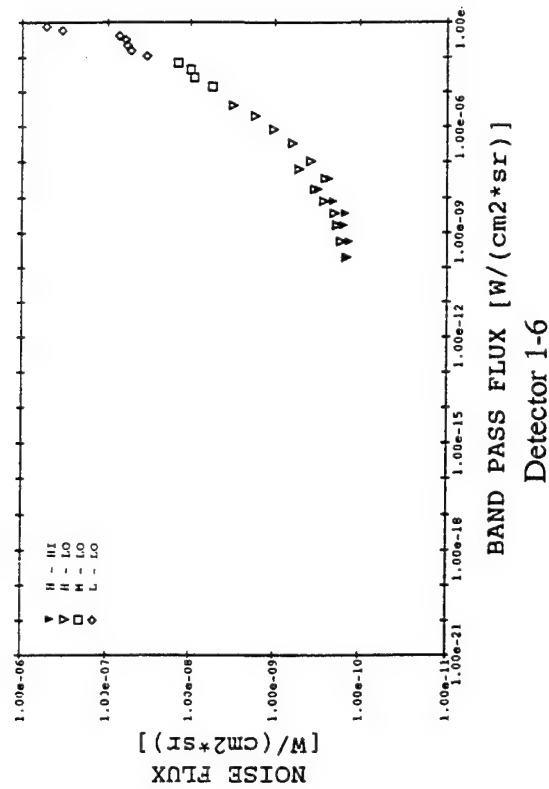
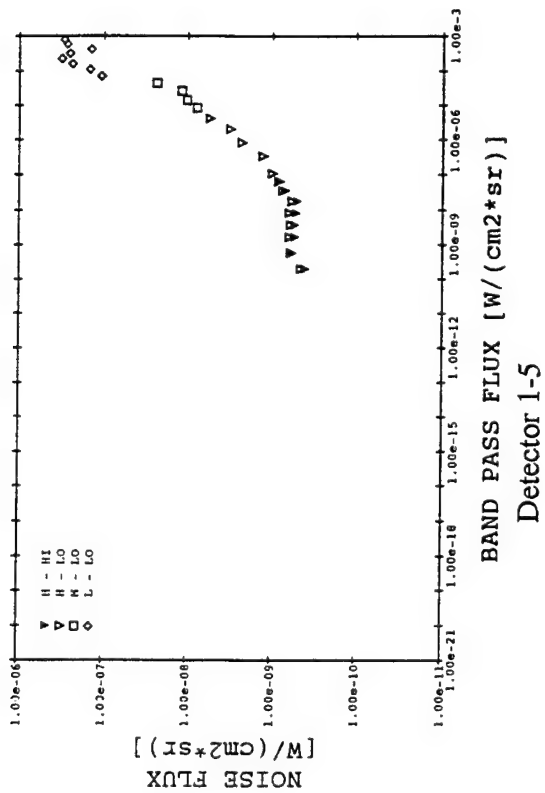
**Radiometer noise flux versus band pass for filter 1**  
 (chopper on, extended area source - order on curve labels is bias - gain).



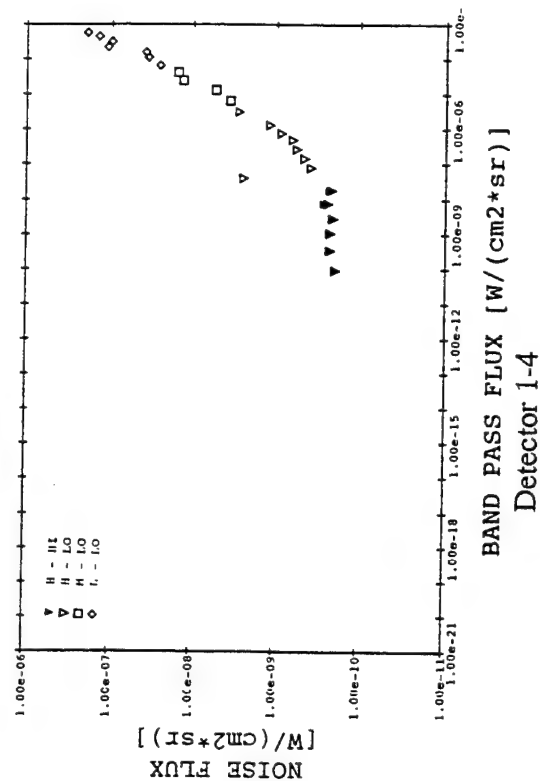
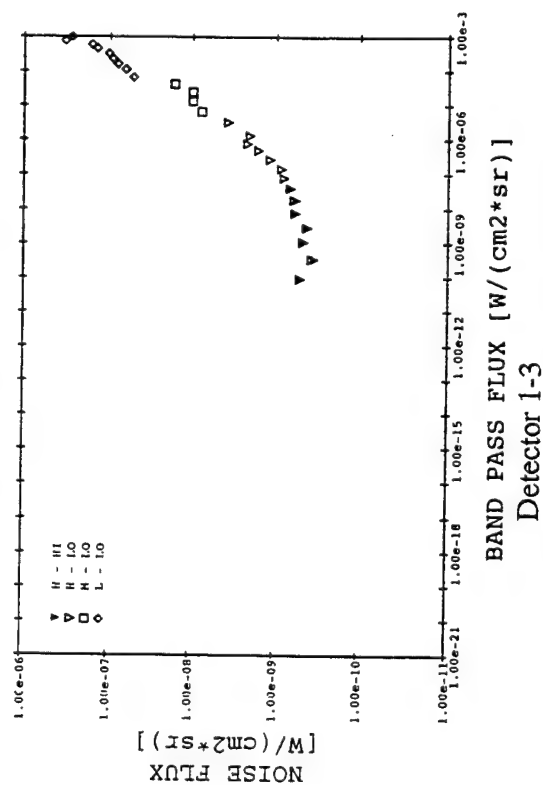
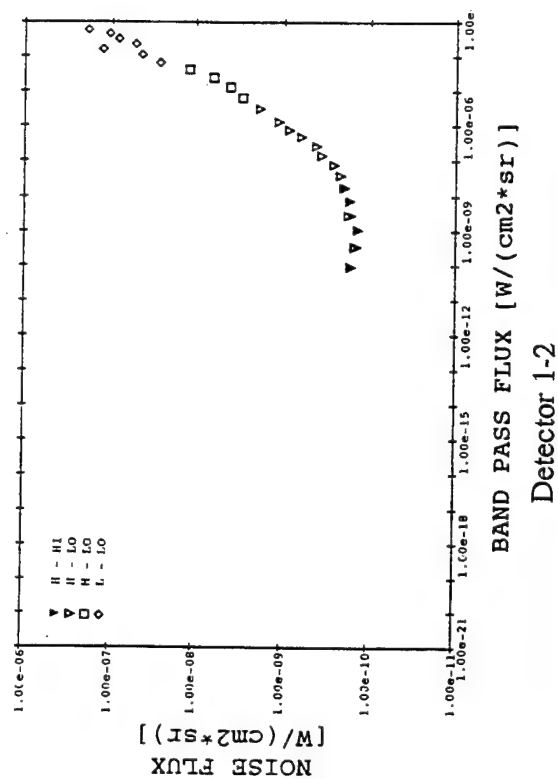
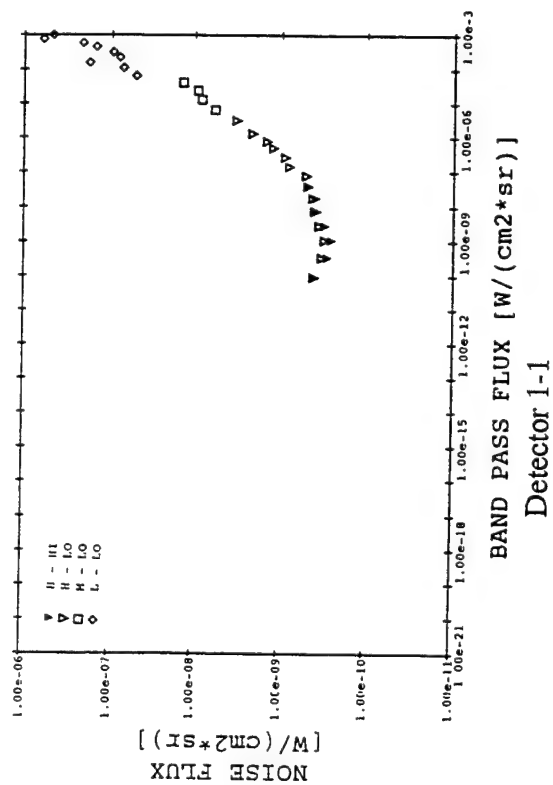
Radiometer noise flux versus band pass for filter 1  
(chopper on, extended area source - order on curve labels is bias - gain).



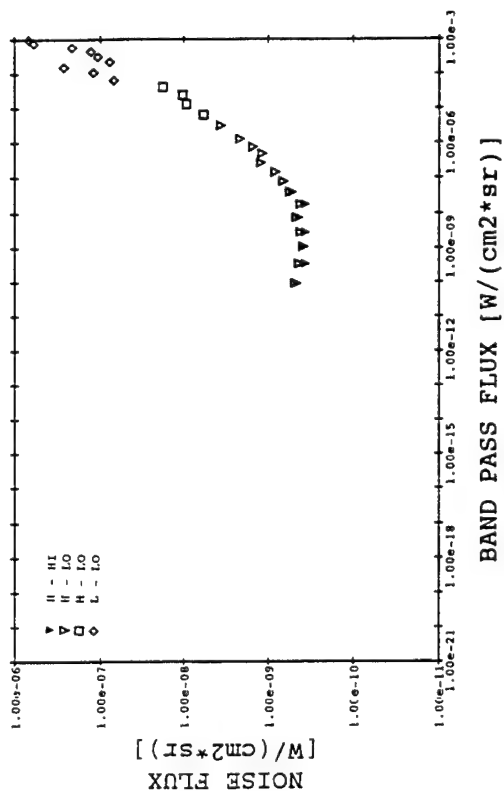
**Radiometer noise flux versus band pass for filter 2**  
(chopper on, extended area source - order on curve labels is bias - gain).



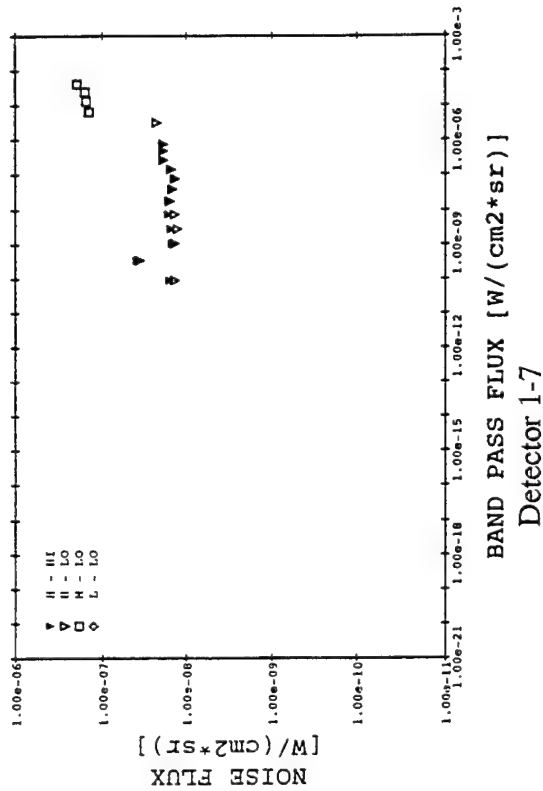
Radiometer noise flux versus band pass for filter 2  
(chopper on, extended area source - order on curve labels is bias - gain).



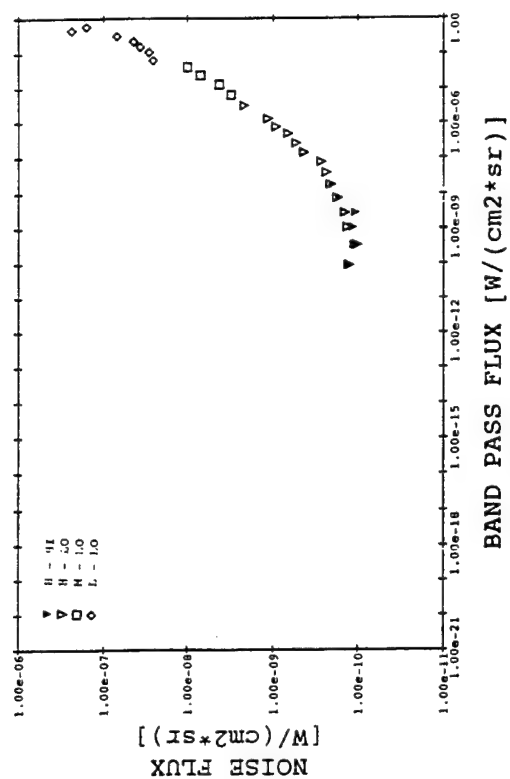
Radiometer noise flux versus band pass for filter 3  
(chopper on, extended area source - order on curve labels is bias - gain).



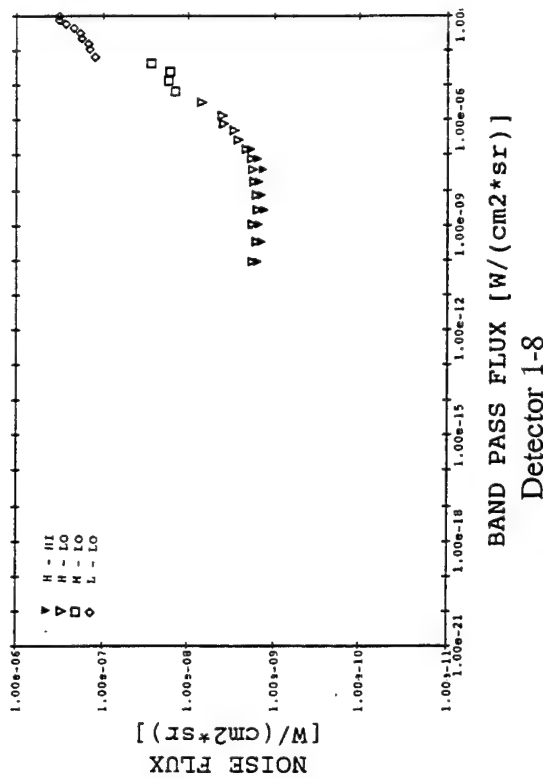
Detector 1-5



Detector 1-7

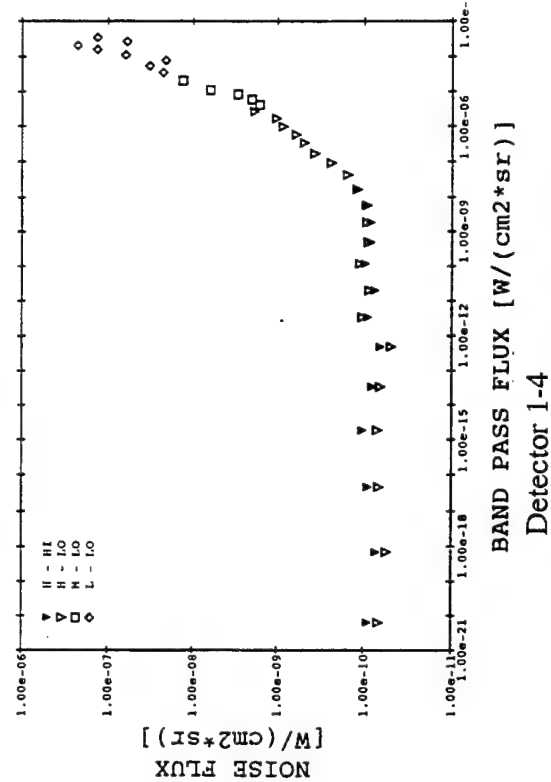
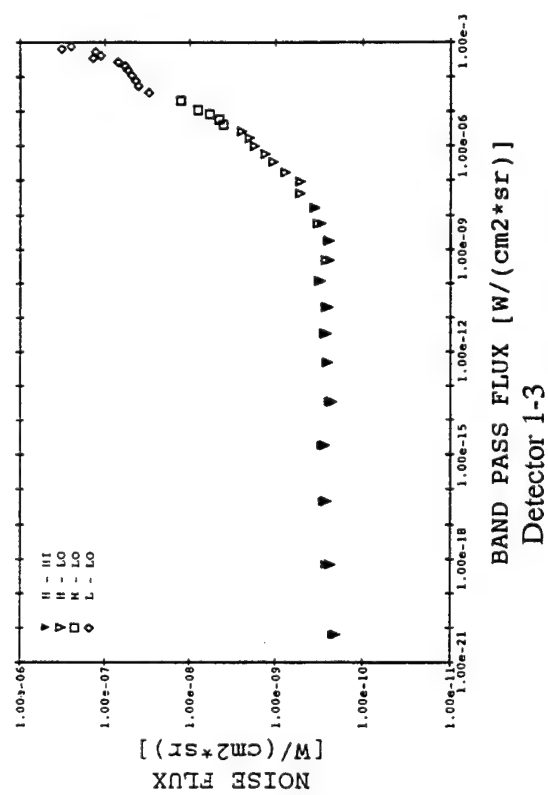
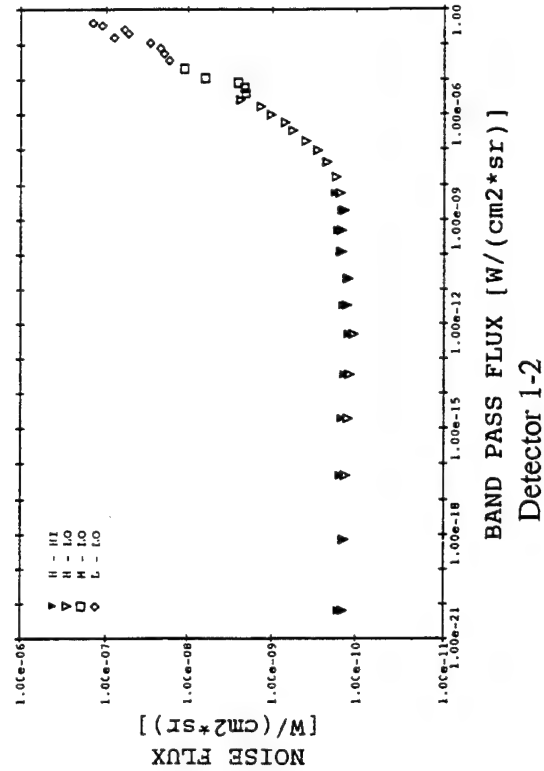
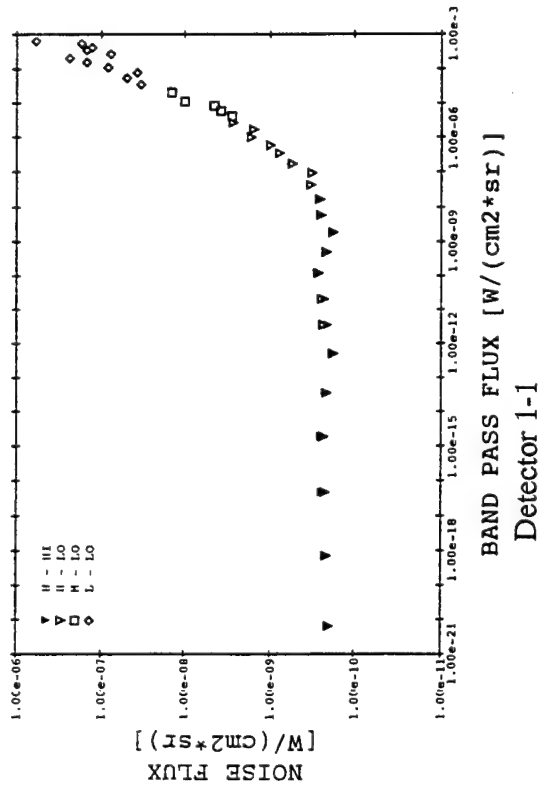


Detector 1-6



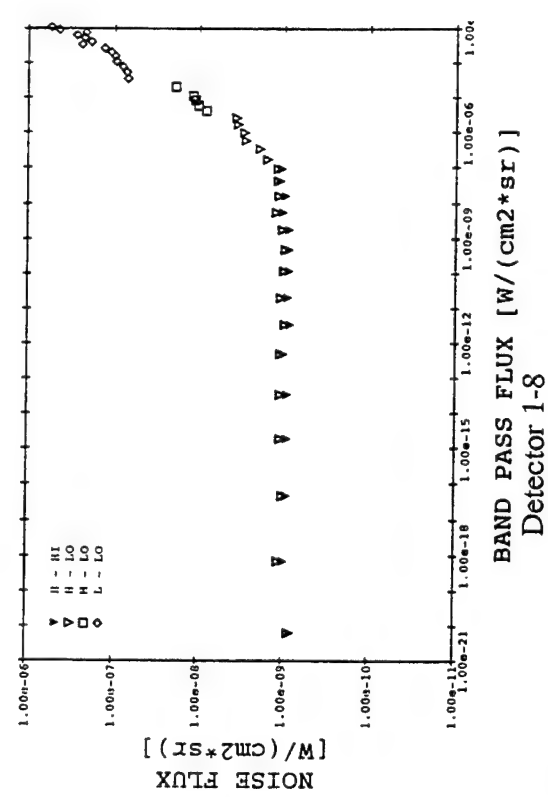
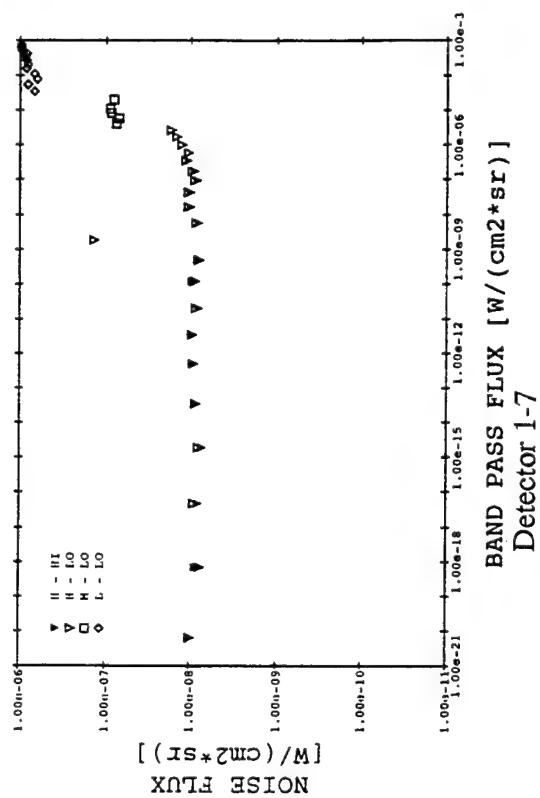
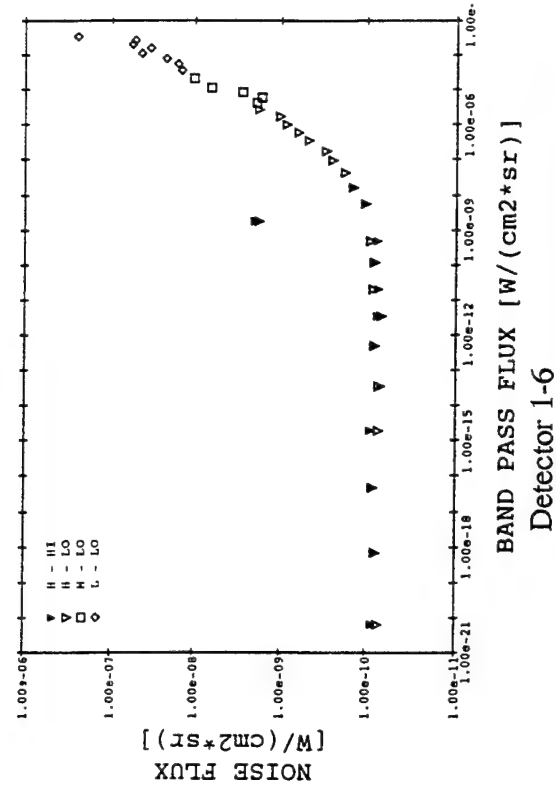
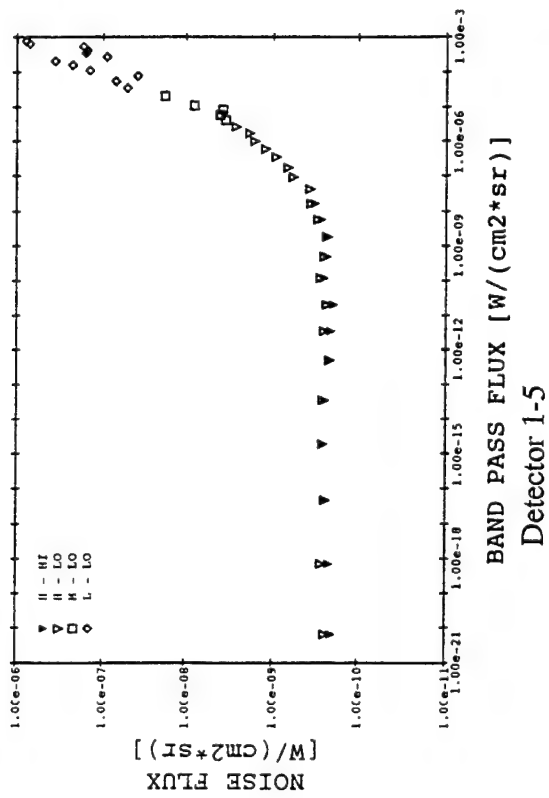
Detector 1-8

Radiometer noise flux versus band pass for filter 3  
(chopper on, extended area source - order on curve labels is bias - gain).

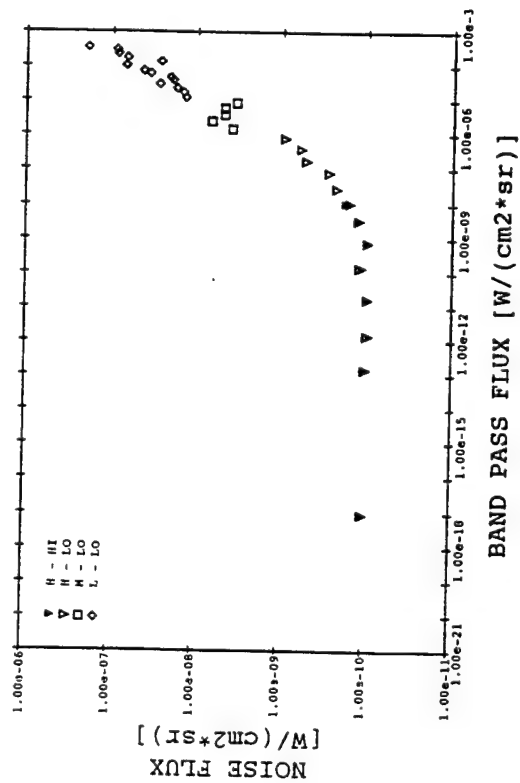


**Radiometer noise flux versus band pass for filter 5**  
(chopper on, extended area source - order on curve labels is bias - gain).

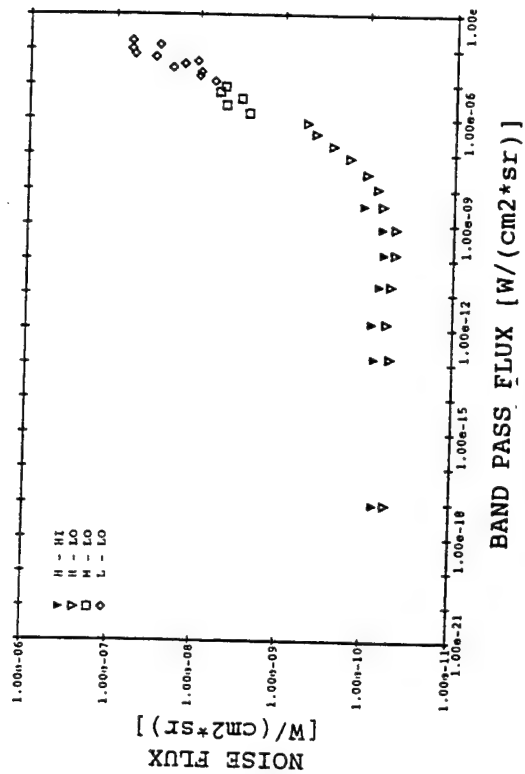




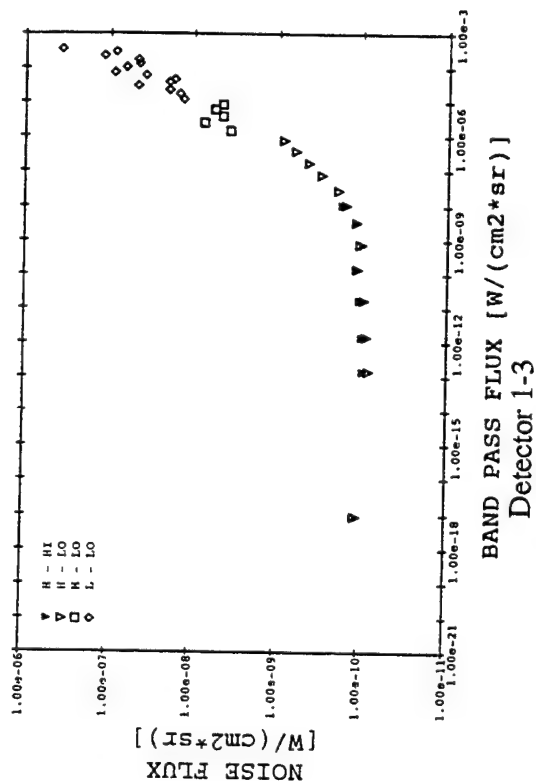
**Radiometer noise flux versus band pass for filter 5**  
(chopper on, extended area source - order on curve labels is bias - gain).



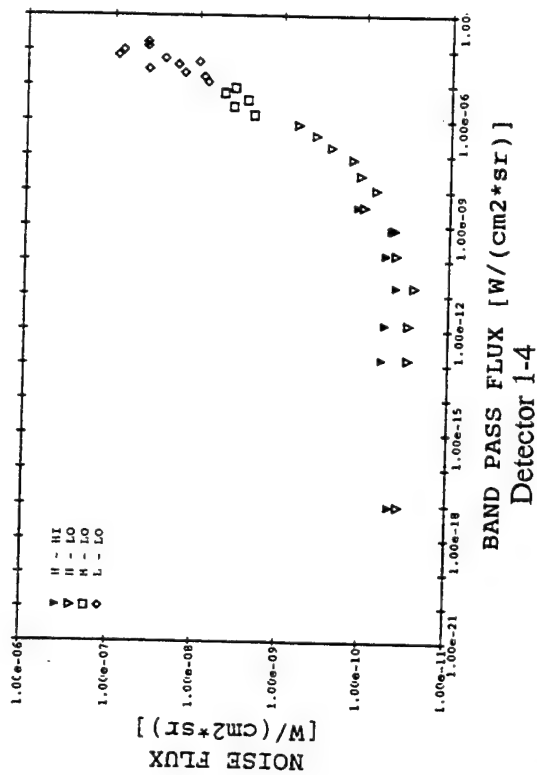
Detector 1-1



Detector 1-2

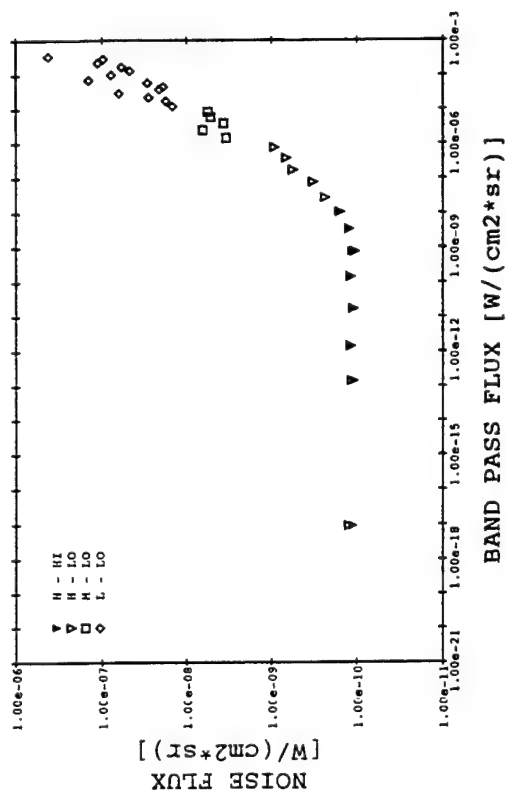


Detector 1-3

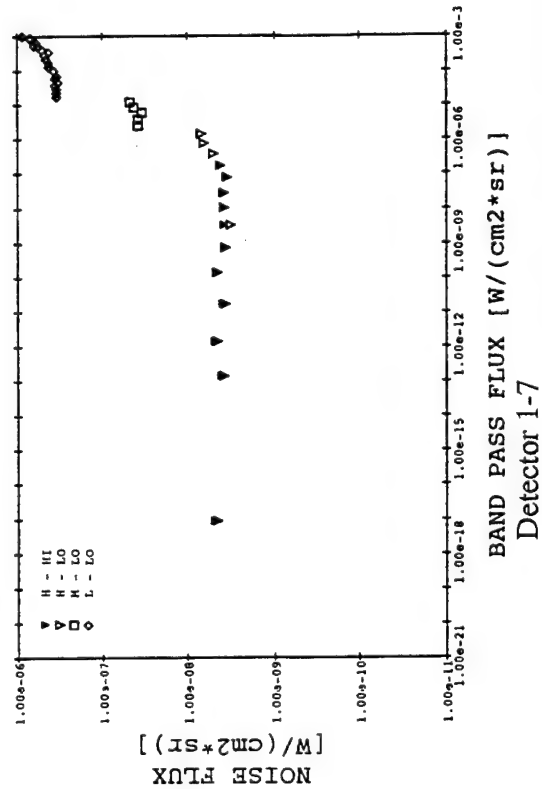


Detector 1-4

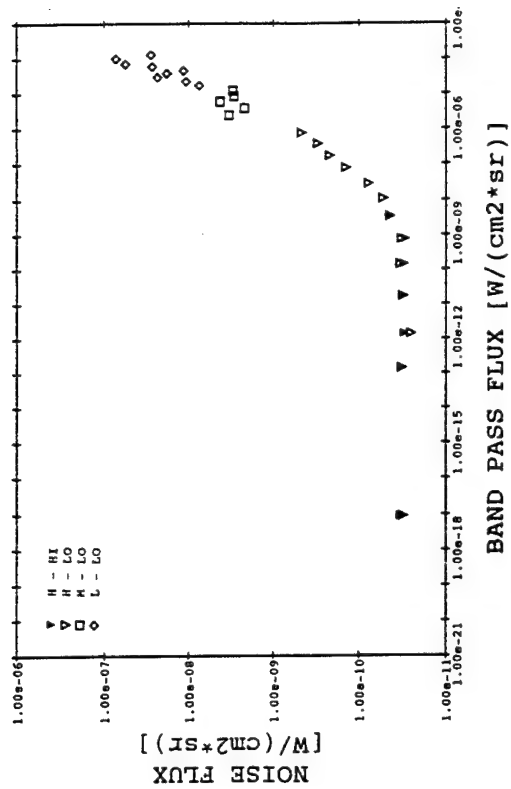
Radiometer noise flux versus band pass for filter 6  
(chopper on, extended area source - order on curve labels is bias - gain).



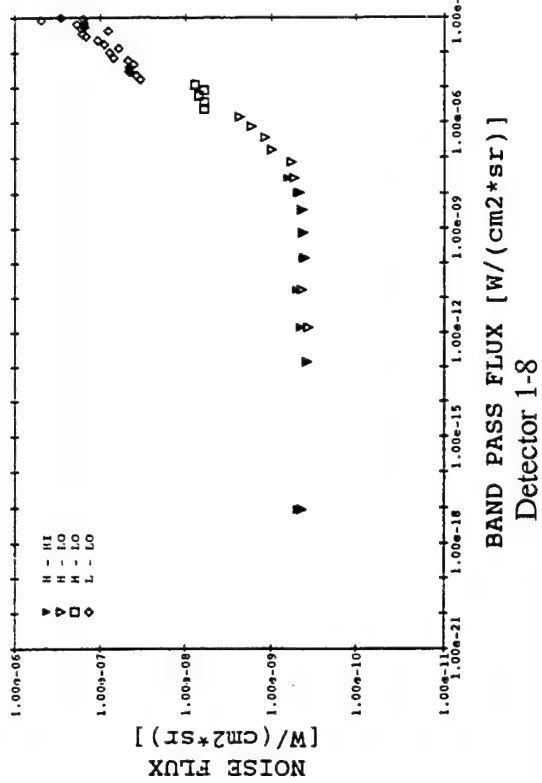
Detector 1-5



Detector 1-7

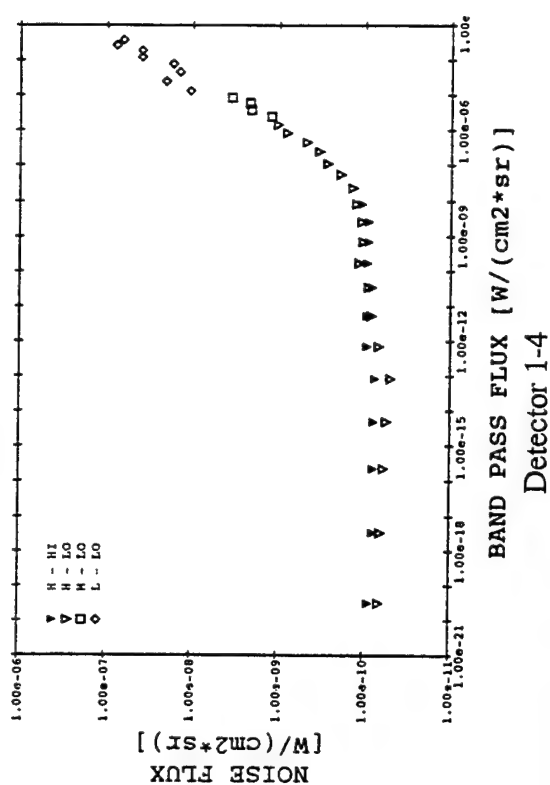
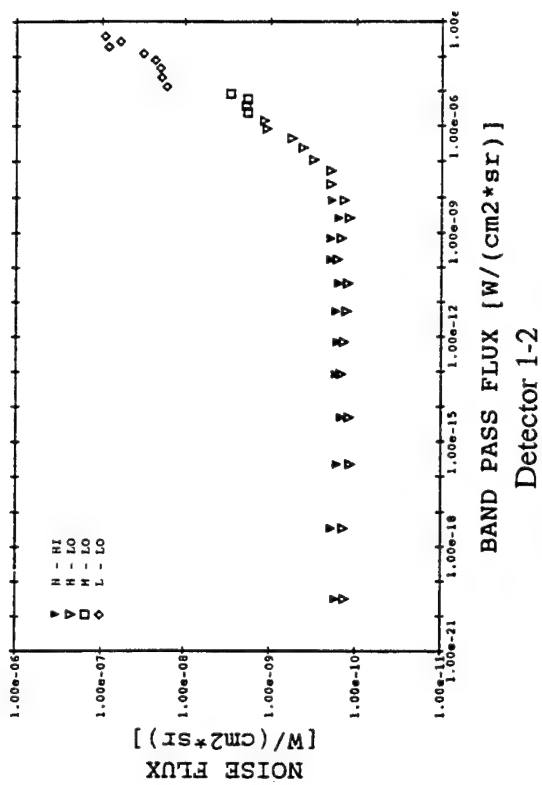
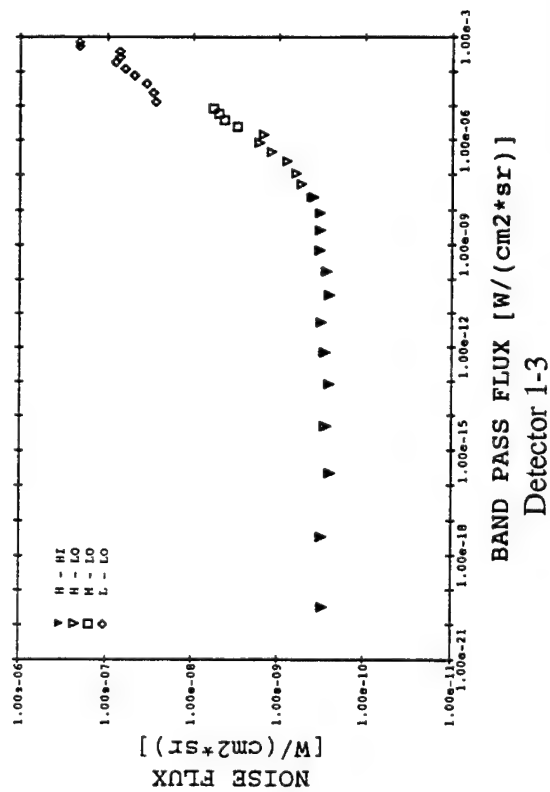
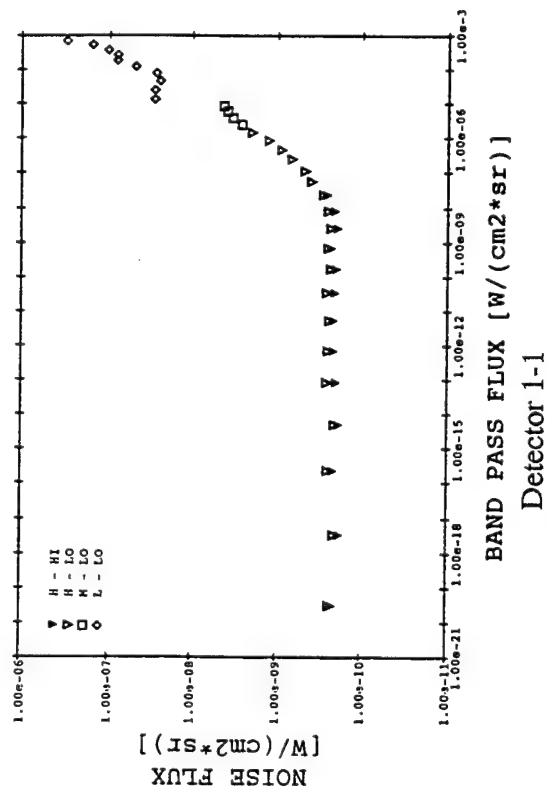


Detector 1-6

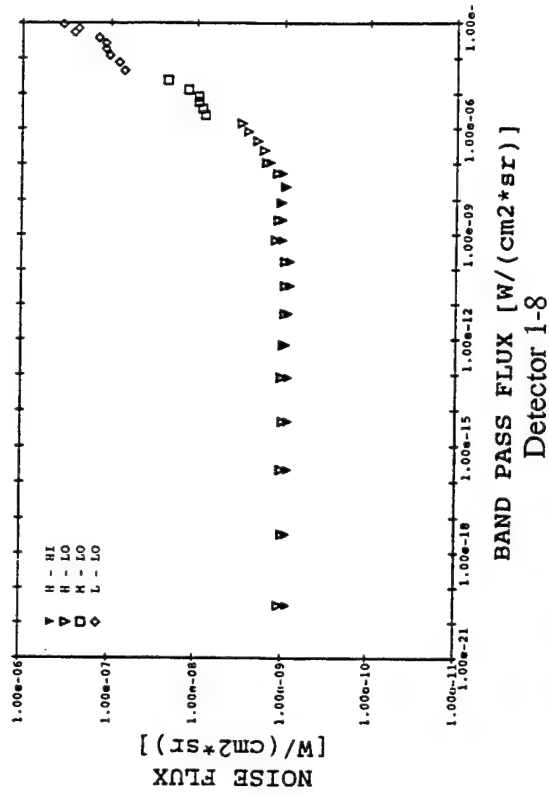
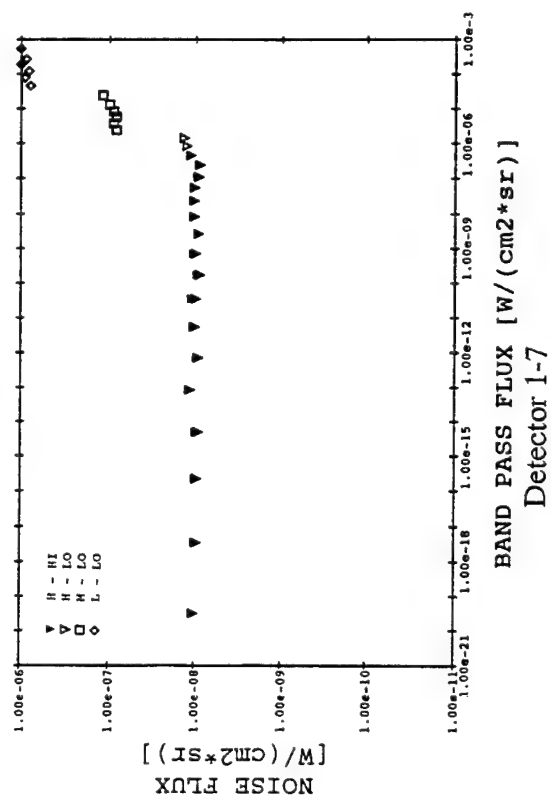
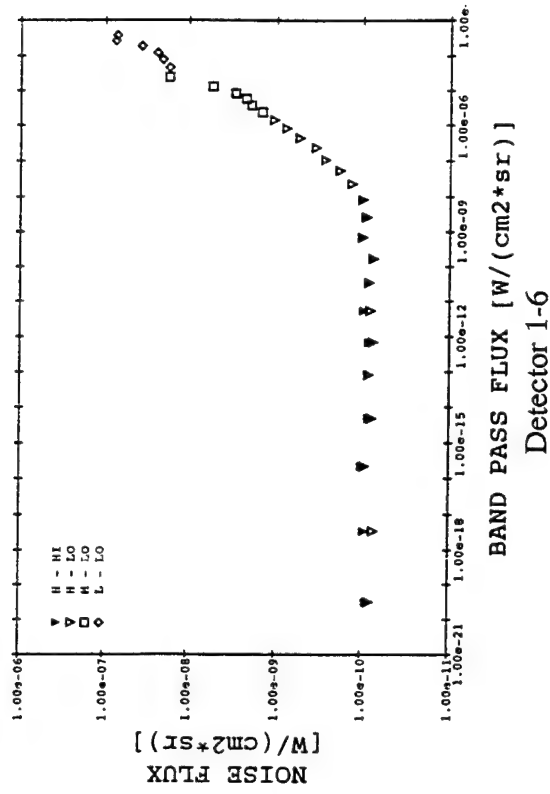
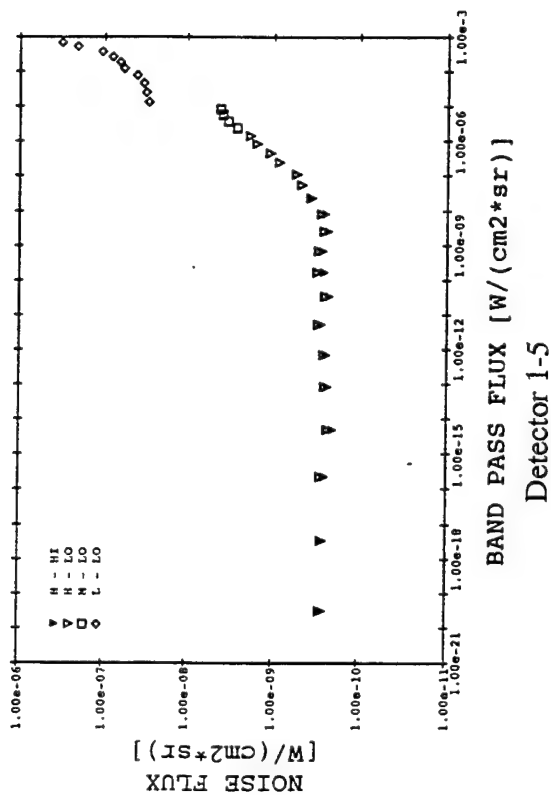


Detector 1-8

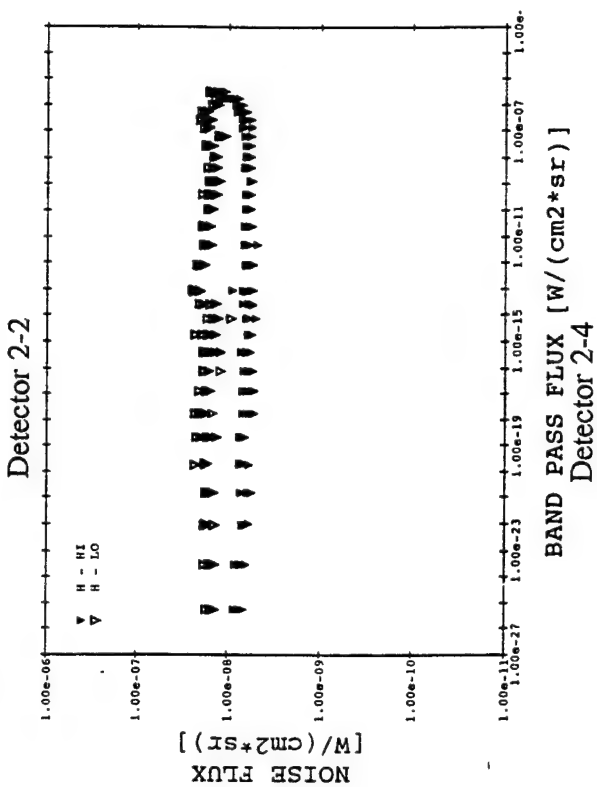
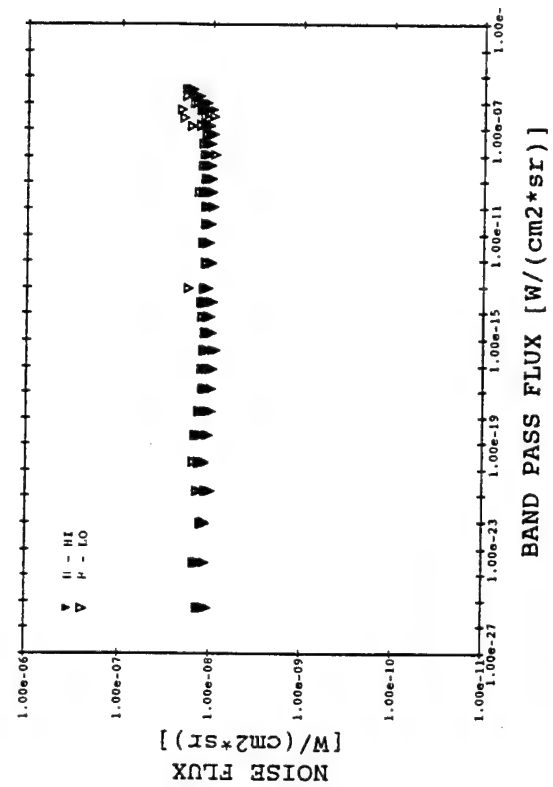
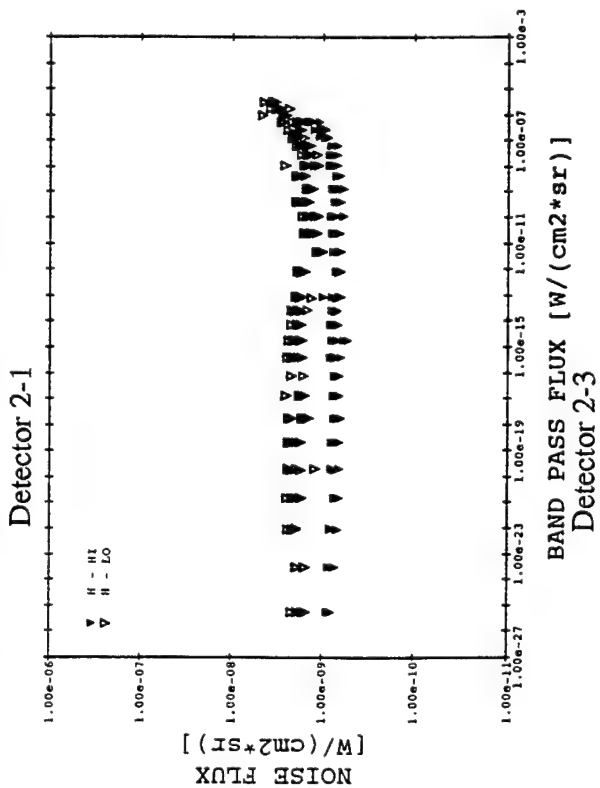
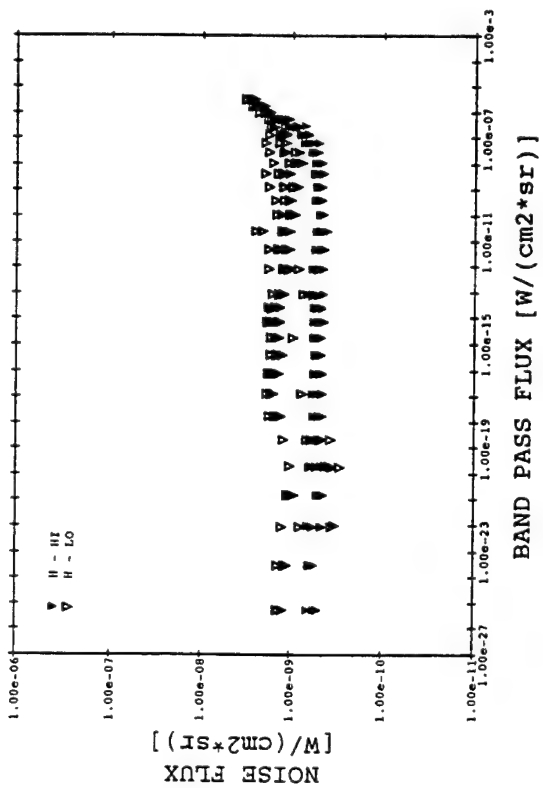
Radiometer noise flux versus band pass for filter 6  
(chopper on, extended area source - order on curve labels is bias - gain).



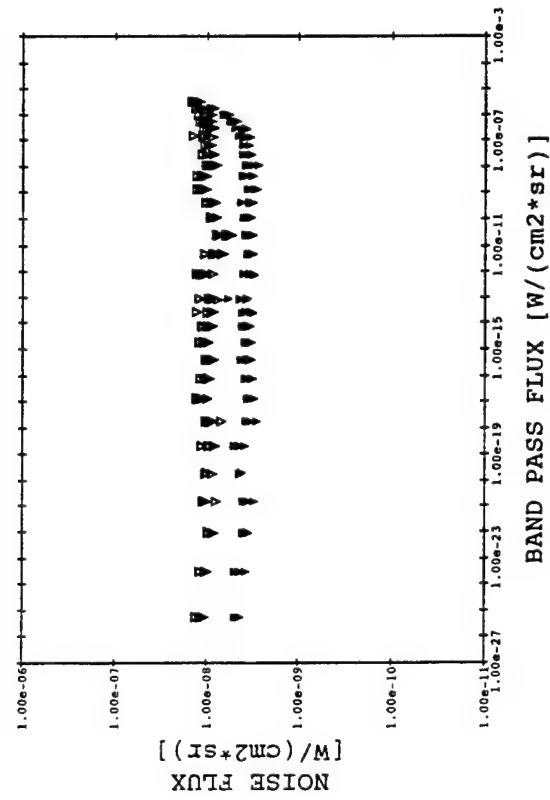
Radiometer noise flux versus band pass for filter 7  
(chopper on, extended area source - order on curve labels is bias - gain).



**Radiometer noise flux versus band pass for filter 7**  
(chopper on, extended area source - order on curve labels is bias - gain).

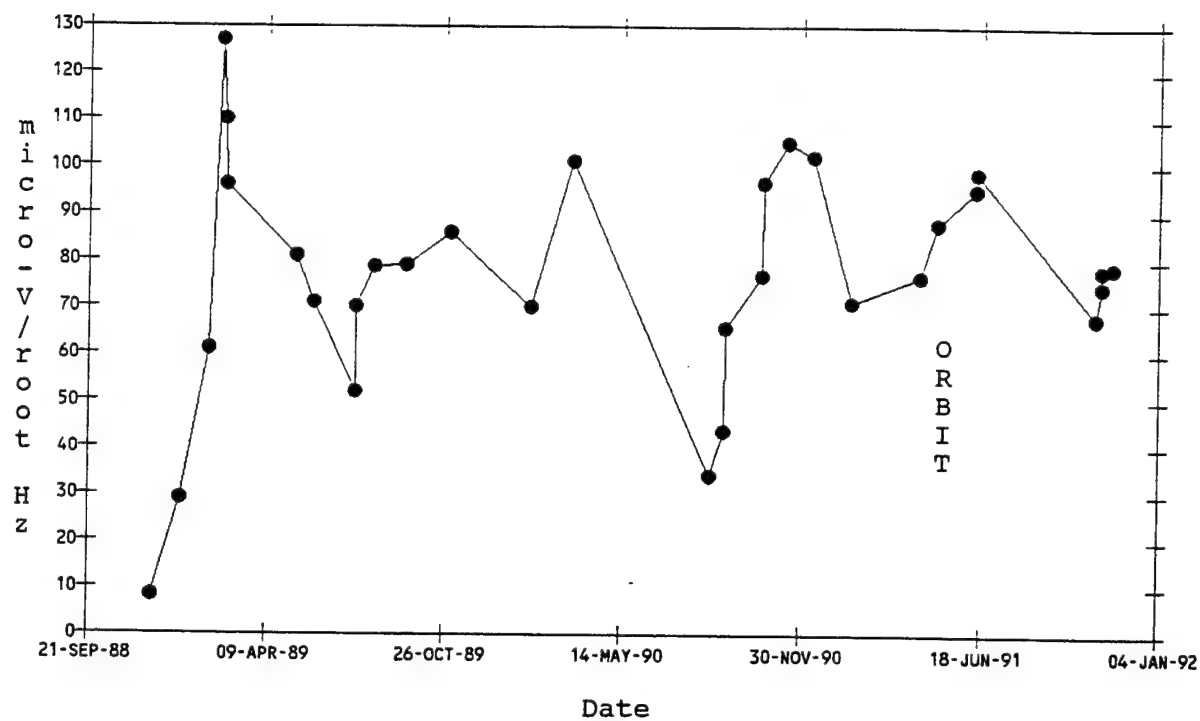


Radiometer noise flux versus band pass  
(chopper on, extended area source - order on curve labels is bias - gain).

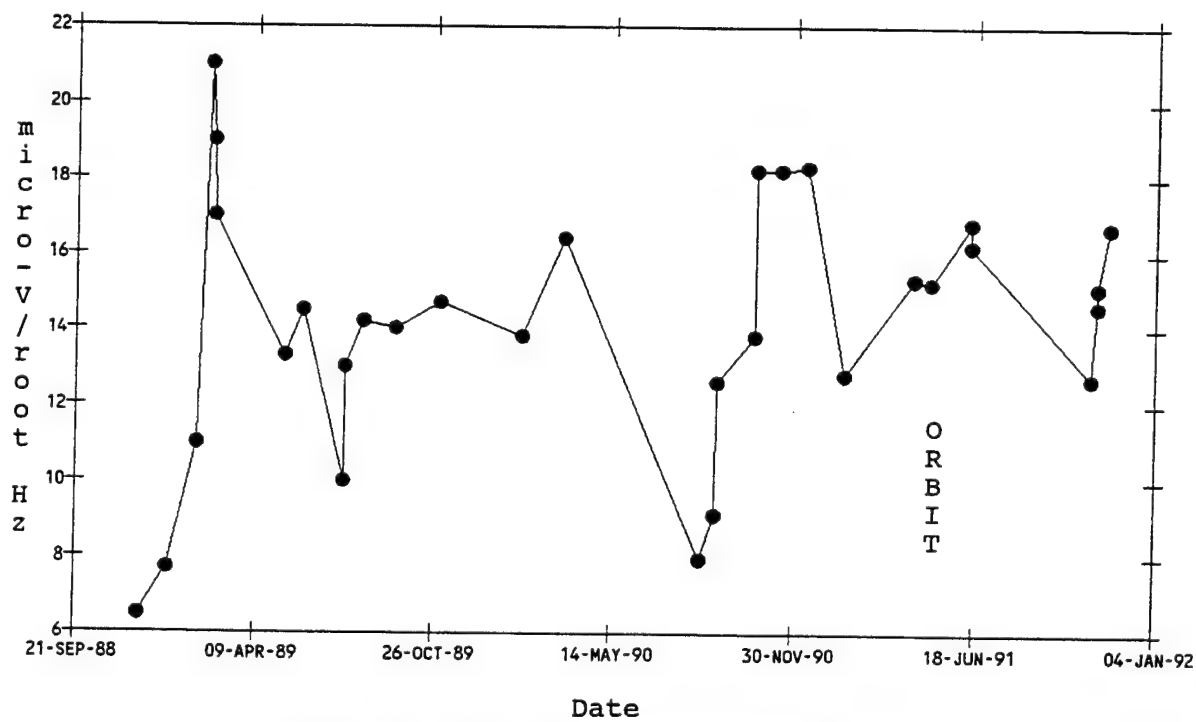


Detector 2-5

Radiometer noise flux versus band pass  
(chopper on, extended area source - order on curve labels is bias - gain).

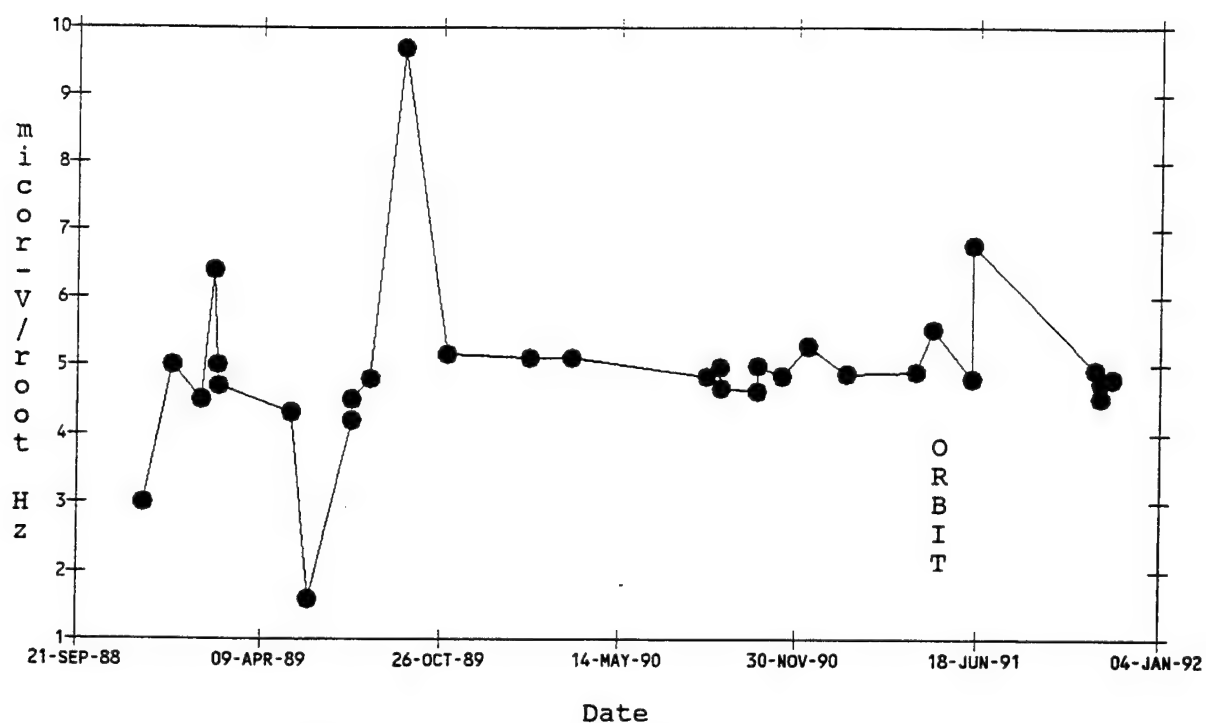


RMS noise history for interferometer detector 1.

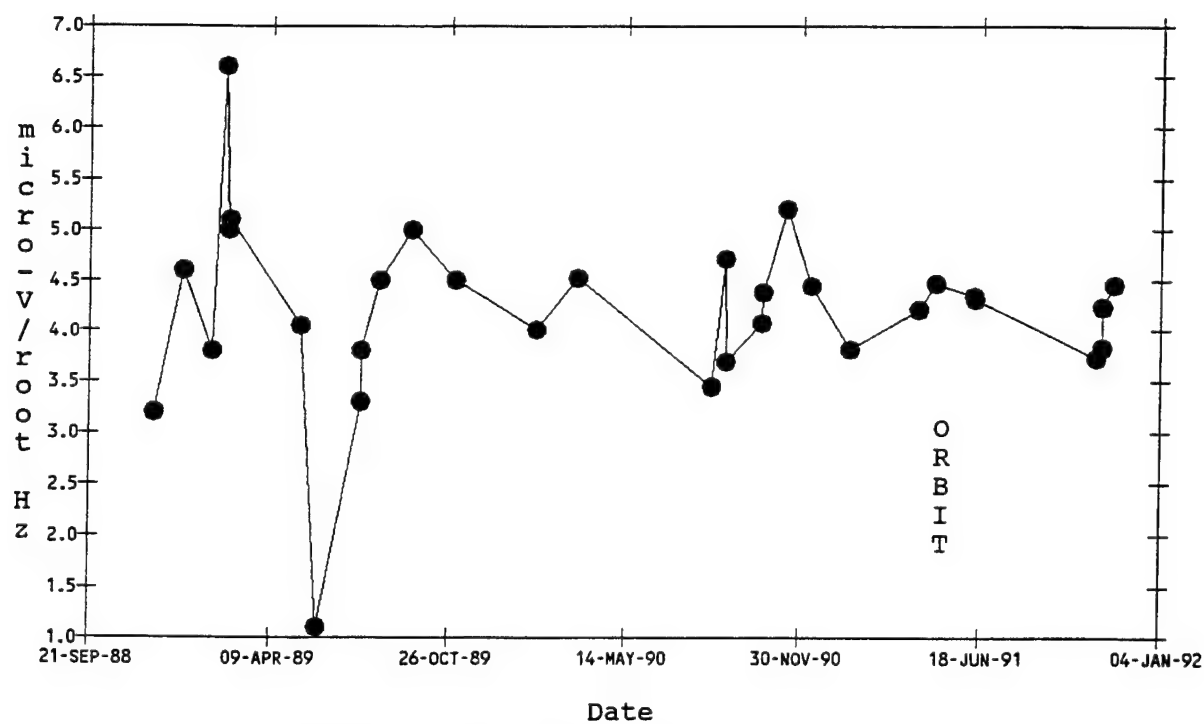


RMS noise history for interferometer detector 2.

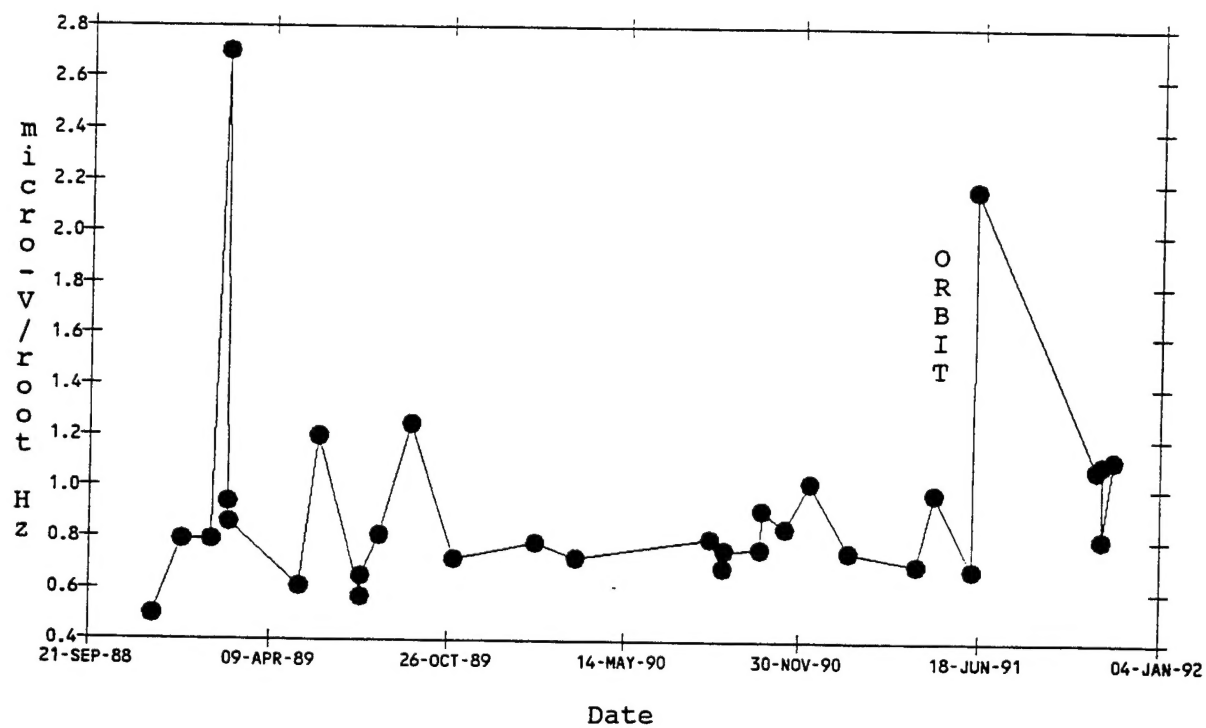




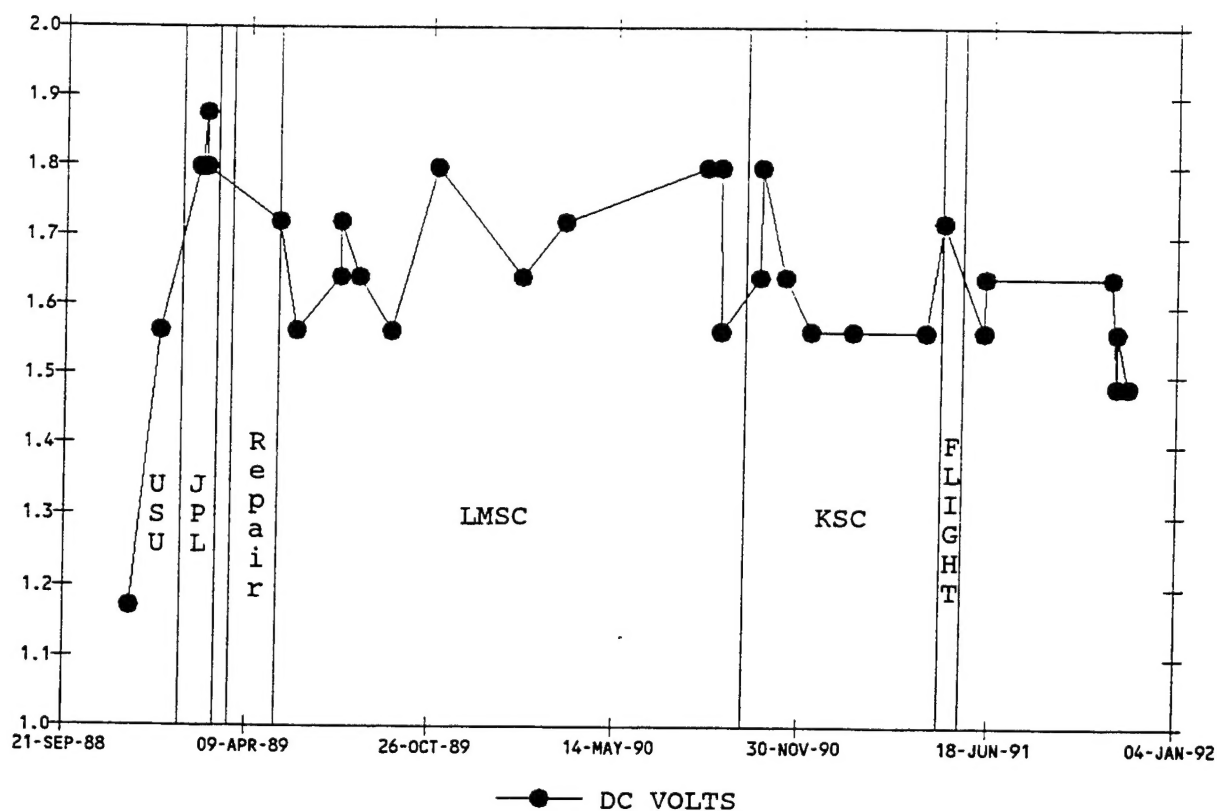
RMS noise history for interferometer detector 3.



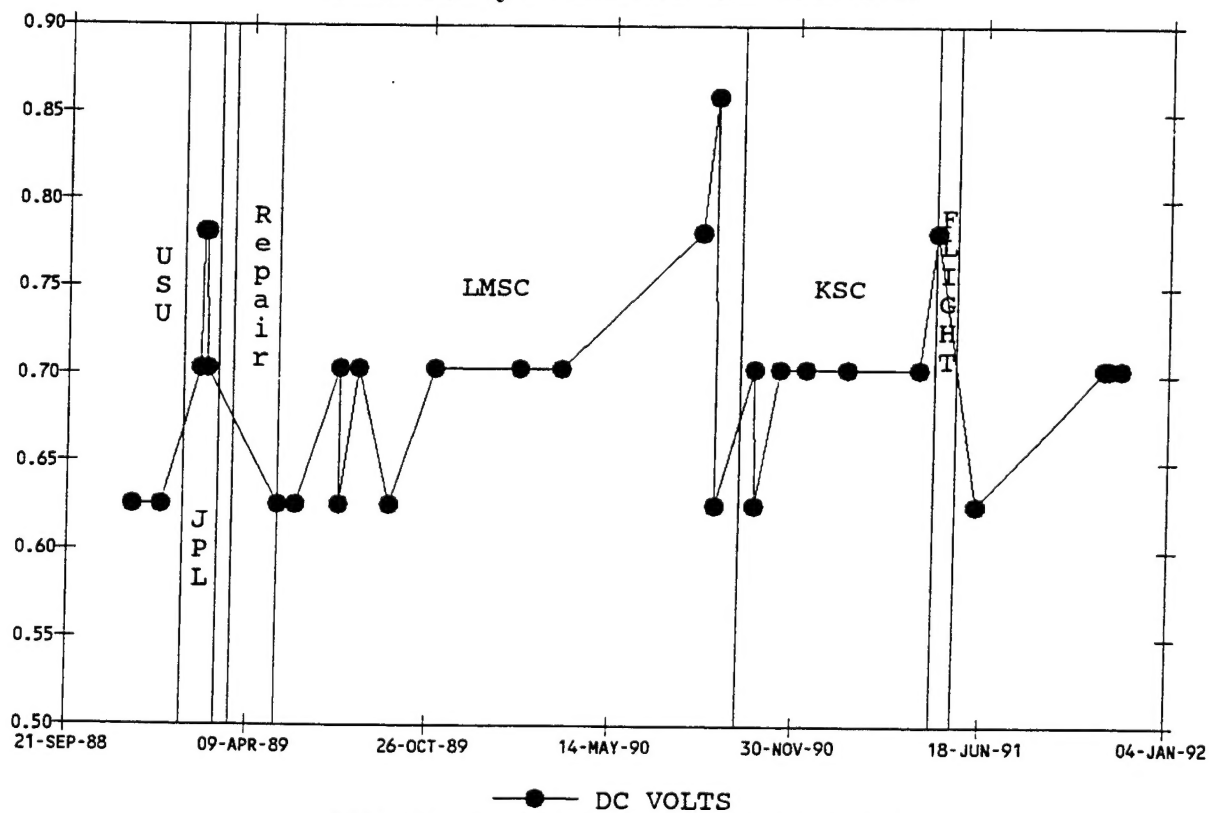
RMS noise history for interferometer detector 4.



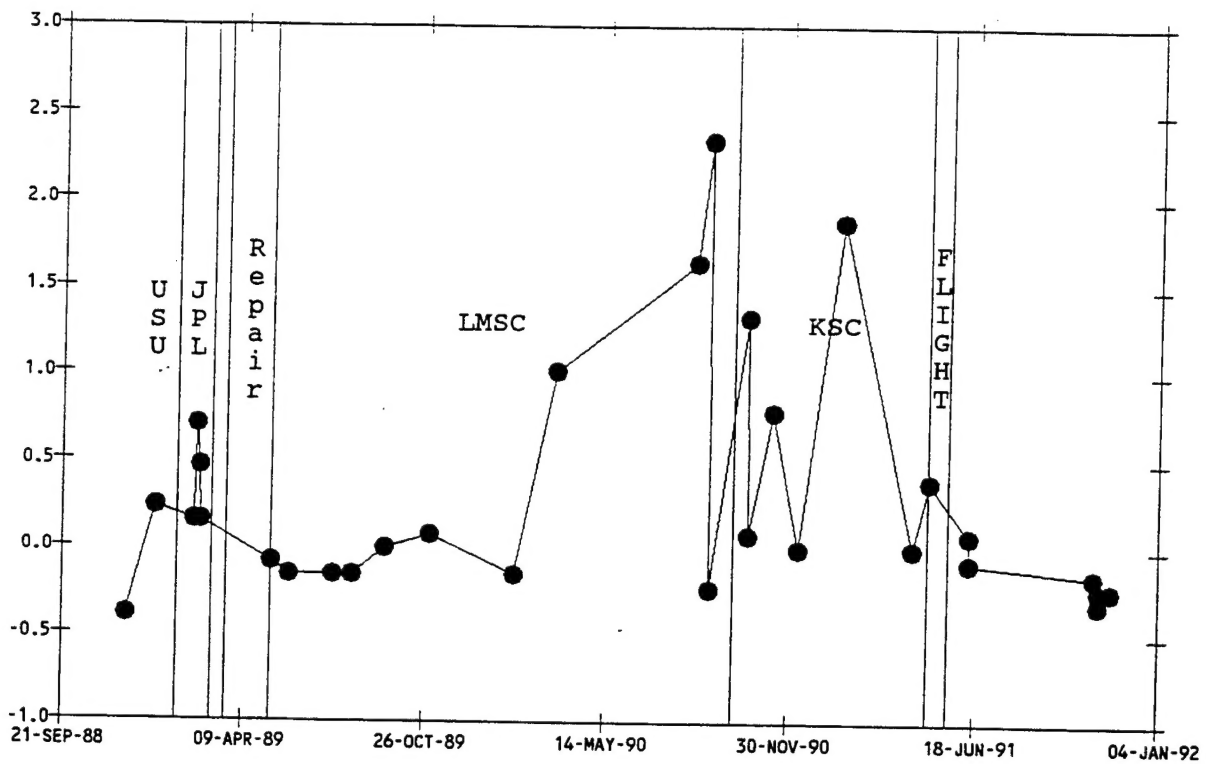
**RMS noise history for interferometer detector 5.**



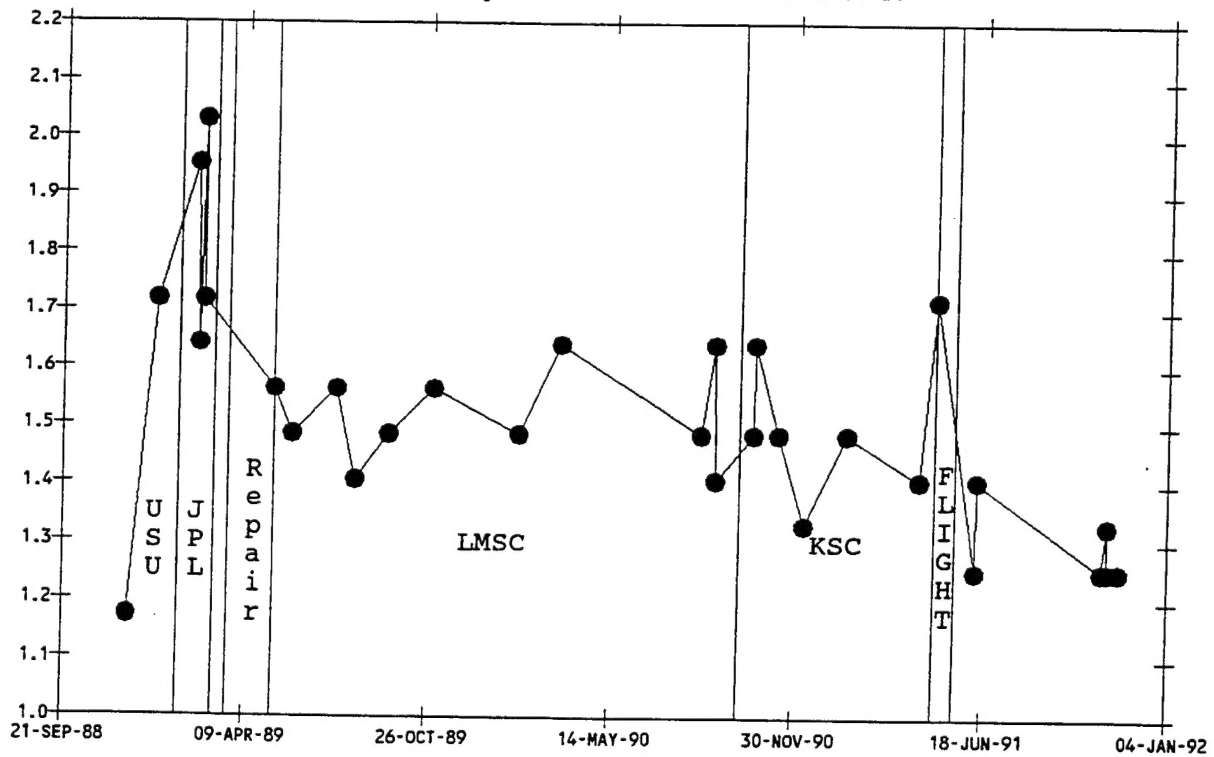
Offset history for interferometer detector 1.



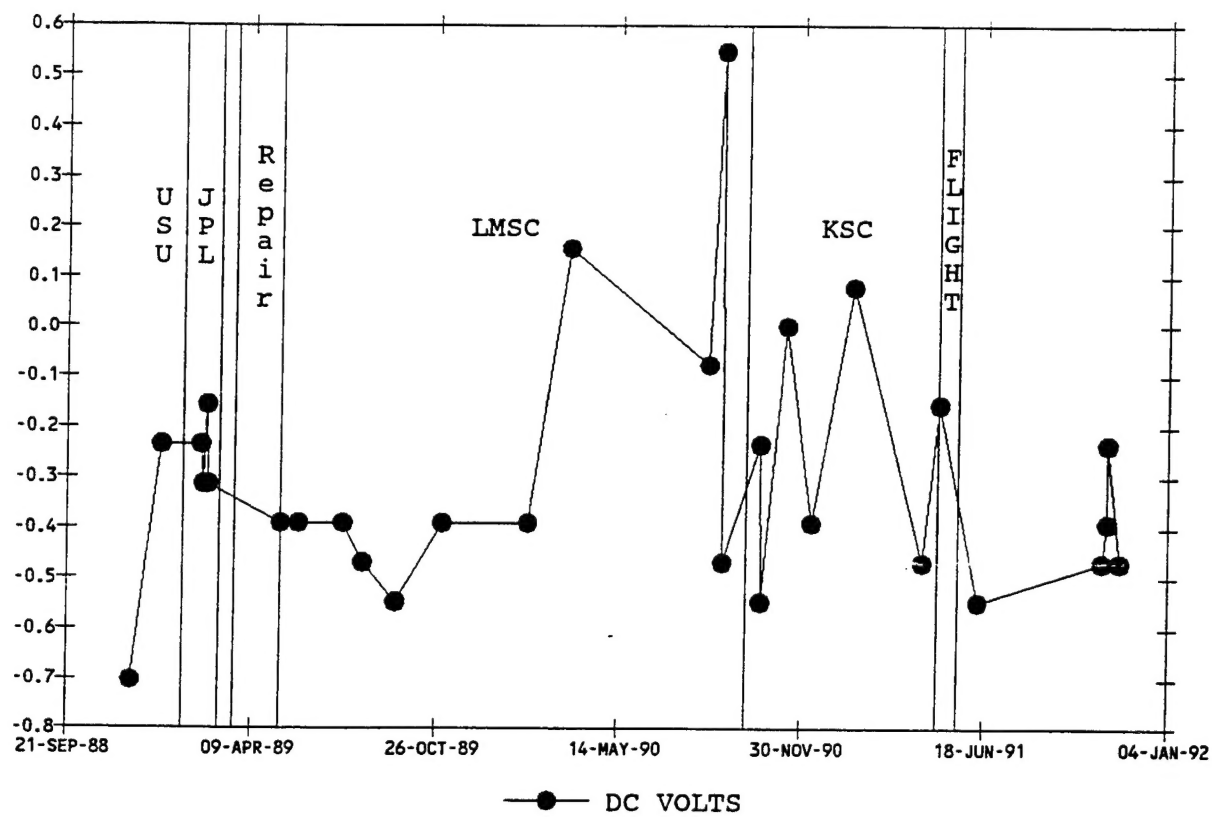
Offset history for interferometer detector 2.



Offset history for interferometer detector 3.



Offset history for interferometer detector 4.



Offset history for interferometer detector 5.